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FIRST ANNUAL

Archæological Report

ONTARIO

1990

The
Ontario Heritage
Foundation

92-00138/

ANNUAL ARCHAEOLOGICAL REPORT, ONTARIO

Volume 1 (New Series)1990

Volumes in the New Series of the Annual Archaeological Report, Ontario, are published annually by The Ontario Heritage Foundation, an agency of the Ontario Ministry of Culture and Communications.

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CN ISSN 1181-9057

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ANNUAL ARCHAEOLOGICAL REPORT, ONTARIO

Volume 1 (New Series) 1990

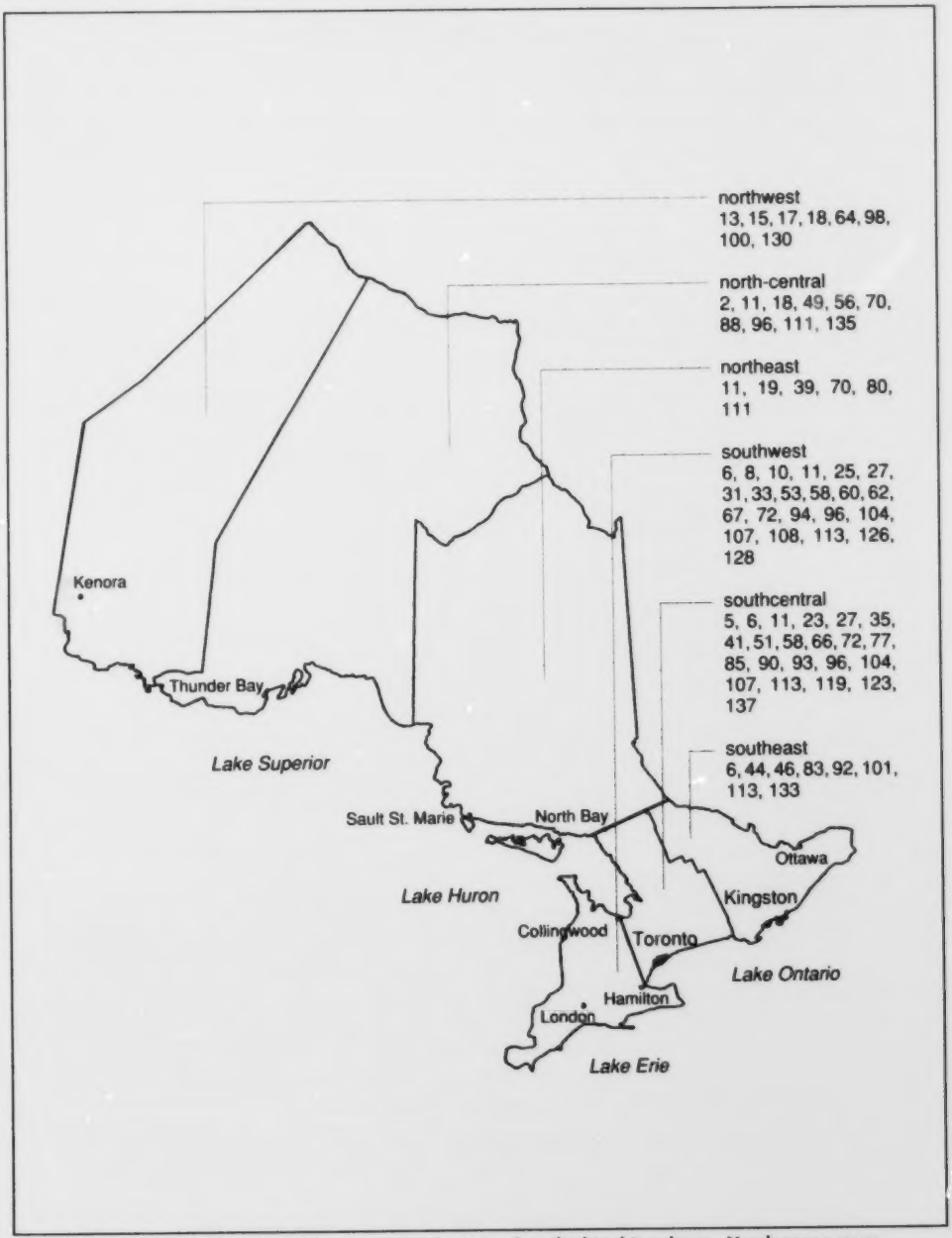
Peter L. Storck
Editor

The objective of the New Series of the *Annual Archaeological Report, Ontario*, is to provide a publication outlet for individuals wishing to publish short abstracts describing the results of archaeological fieldwork conducted in the province of Ontario and licensed by the Minister of Culture and Communications.

These abstracts will be of interest to those members of the general public who want to learn about the prehistoric and historic record of Ontario and will be a valuable reference tool to archaeologists as well as specialists in many other professions.

The Ontario Heritage Foundation seeks to preserve, protect, and promote Ontario's archaeological, architectural, cultural, historical, and natural heritage for the benefit and enjoyment of present and future generations of Canadians.

A non-profit agency of the Ontario Ministry of Culture and Communications, The Ontario Heritage Foundation was established by the Province of Ontario in 1968 and operates under the Ontario Heritage Act.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Map of Ontario showing locations of archaeological activity described in this volume. Numbers are page references to relevant abstracts.

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FROM THE CHAIRMAN, THE ONTARIO HERITAGE FOUNDATION

It is my pleasure to introduce The Ontario Heritage Foundation's publication *Annual Archaeological Report, Ontario* (New Series). This volume, published sixty-two years after the demise of the original series (1887-1928), is a collection of abstracts covering the 1987, 1988, and 1989 field seasons in Ontario.

The Ontario Heritage Foundation, through its Board of Directors and Archaeology Committee, hopes to add to general archaeological knowledge by publishing this annual collection of summaries of fieldwork done by both professional and avocational archaeologists around the province. The volume highlights the diversity of work accomplished across a broad spectrum of specialities.

Heritage preservation, in all its forms, has become a major social and economic force in Ontario. The Ontario Heritage Foundation is proud to be a leader in this area. We believe the publication of the 1990 *Annual Archaeological Report, Ontario* is an important step in the promotion of our heritage as a gift from the past, to be held for the future.

Richard M. Alway

FROM THE CHAIRMAN, ARCHAEOLOGY COMMITTEE THE ONTARIO HERITAGE FOUNDATION

This volume is the product of a particular circumstance and a particular combination of interests. Some years ago Peter Storck, a member of The Ontario Heritage Foundation (OHF), Archaeology Committee, formed the conclusion that Ontario's archaeological record deserved, and required, better treatment. Once, before 1928, it had such treatment — the *Annual Archaeological Report, Ontario* — printed, bound, and available for the public to read, and all this from the Ontario government. In 1928, however, the government ceased its efforts, and since then even reading Ontario's archaeological record has been in itself a major enterprise.

Peter Storck decided to remedy the situation. He conceived, helped design, and then edited this revival of the AARO. He got the OHF Archaeology Committee to sponsor it. It was a labour of love, and the result is a lasting testimony to Peter's efforts. We in the Archaeology Committee are proud to sponsor his efforts and to finance this reborn, and much improved, version of the AARO. We hope and trust that, like its predecessor, it will have a lasting value for all those interested in Ontario's prehistory and history.

Robert Bothwell

FROM THE EDITOR

This volume is the inaugural issue of the New Series of *Annual Archaeological Report, Ontario*. This name is derived from an earlier series published between 1887 and 1928 and informally known by the acronym AARO (see Garrad 1987). The reports in that series describe the results of archaeological work funded by the Province of Ontario, through the Ministry of Education. Published as appendices to the annual reports of the Ministry of Education, these reports publicly documented government-supported activities in archaeology in the province. This new series of AARO is, as the name suggests, a continuation of the earlier series and will also publicly document government activities on behalf of the general public — in this instance, the regulation of archaeological work through licensing. Under the Ontario Heritage Act, which became law in 1975, all archaeological work in Ontario must be done under licence issued by the Minister of Culture and Communications upon recommendation of The Ontario Heritage Foundation (OHF), Archaeology Committee, an agency of the Ministry of Culture and Communications (MCC). Because of government's responsibility for licensing, it is appropriate for the OHF to provide a publication outlet for individuals who receive archaeological licences to publish on their discoveries and make their work, and indirectly the regulatory work of the OHF and the MCC, more widely known.

The proposal for a new series of AAROs was raised at a policy meeting of the OHF's Archaeology Committee several years ago. The idea behind this proposal was strongly influenced by the publication *Current Research in the Pleistocene*, which was initiated by Dr Robson Bonnichsen, director of the Centre for the Study of the First Americans in Orono, Maine. In 1989, the proposed new series of AAROs received formal approval and funding by the Archaeology Committee and the OHF.

Although intended as an annual publication reporting on the archaeological work which has been done in a particular calendar year, the Archaeology Committee decided that the first volume of the new series of AAROs would contain reports for three years: 1987, 1988, and 1989. This decision was taken so it would be possible to incorporate manuscripts received in response to the first call for papers in 1988 (for the years 1987 and 1988) as well as manuscripts for 1989.

The first volume of the new series of AAROs contains short abstracts reflecting the full range of archaeological work conducted in the province, from site monitoring to large-scale excavations. These abstracts also reveal the diversity of people involved in that work, including avocational archaeologists, consultants, and individuals affiliated with museums and universities. The projects reported in this volume represent approximately one-quarter of the total number of licensed projects carried out between 1987 and the end of 1989. Unfortunately, this sample is not large enough to provide a full picture of the diversity of fieldwork that was conducted or the relative amount of work in the various types of activities and geographic areas of the province. At present, this information could only be obtained by reviewing all of the unpublished licence reports submitted at the end of each calendar year, or shortly thereafter, to the Archaeology Committee of the OHF and subsequently filed with the Heritage Branch of the Ministry of Culture and Communications. It is hoped that future volumes of the new series of AAROs will be able to provide a more comprehensive picture of archaeological activity in Ontario. In addition to making the new AARO a more powerful reference tool, this information would be useful for tracking changes taking place in the discipline of archaeology as practised in the province.

Peter L. Storck

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ARCHAEOLOGICAL REPORT, ONTARIO 1987

CONSERVATION ACTIVITIES

MINISTRY OF CULTURE AND COMMUNICATIONS: ARCHAEOLOGICAL CONSERVATION ACTIVITIES IN NORTH-CENTRAL ONTARIO

David Arthurs

The 1987 field season was taken up with several emergency response projects, on sites threatened by erosion, resource extraction, or vandalism.

CUMMINS PALAEO-INDIAN SITE

In early spring, the Cummins Paleo-Indian quarry and habitation site (DcJi-1) in the City of Thunder Bay was looted. In at least thirteen areas, some up to 4 metres across, the duff zone had been flipped over with a square-blade shovel and the sand raked with a grass rake or garden claw. The recovery of artifacts apparently led to deeper digging. The most seriously disturbed areas were in Locality 2, adjacent to P. Julig's University of Toronto excavations and near the National Museum excavations of the 1960s.

Native Experience Programme students Tim Cowley and James Clark assisted in extending Julig's grid of 1-metre units to cover the areas of disturbance, and the looters' pits were photo-documented and mapped. Disturbed soil was screened, and thousands of pieces of detritus, micro-debitage, and some core and biface fragments were collected and bagged by grid unit to recover some provenience data (Arthurs 1989b). The looters' pits were then backfilled.

The site was looted again later in the summer, but circumstances prevented further work before the first snowfall. In autumn, Arthurs initiated an "Archaeological Watch," organizing Ontario Archaeological Society (OAS) members to assist in monitoring this important site.

RENSHAW ARCHAIC SITE

Mineral exploration and extraction activities have significantly impacted the Late Archaic Renshaw site (DaJi-1), which lies on an elevated gravel ridge south of Thunder Bay. Arthurs's salvage operations over the past decade have yielded chipped stone tools, small knives, spears, socketed point tips, awls of native copper, and quantities of calcined bone.

Assisted by Cowley and Clark, and by volunteers Barbara Rees and Patricia Greer, the 1987 field work included re-establishing the 5-metre grid disturbed by vehicular traffic over the past several years, a controlled surface pickup in fifty units, and the excavation of one 5-metre unit in an area of the site threatened by

Ministry of Culture and Communications, 1825 Arthur Street East, Thunder Bay, Ontario, P7E 5N7
Conservation Licence 87-78

future granular removal of gravel. A relatively undisturbed artifact-bearing layer containing probable hearths and storage pits demonstrated the site's potential for further excavation, in spite of its heavily disturbed surface (Arthurs 1989a).

STURGEON LAKE SALVAGE

A remote salvage excavation was conducted on site EaJp-2 located on Sturgeon Lake, north of Ignace, Ontario. Archaeological Conservation Programme member Bruce Tomlinson reported that the site, discovered in a forest fire burn zone in 1985, was actively eroding. Arthurs, Tomlinson, and Cowley spent two weeks at the site, mapping, surface collecting, and excavating 6 square metres (Arthurs 1989c).

A late historic, probably aboriginal, component overlay at least one prehistoric component. The former yielded heart-shaped tobacco grade markers, rectangular nails, pipe-stem fragments, glass seed beads, and brass spun-back buttons, in association with an oval hearth and ash pits and a cobble feature possibly representing the outline of an historic lodge.

The lower occupation produced Blackduck and Selkirk ceramics, lithics, and such features as a pavement of fire-cracked cobbles. Dense concentrations of calcined bone fragments characterized both the prehistoric and historic components.

DOG RIVER SITE

In early August 1987, Arthurs, accompanied by members of the Ontario Provincial Police and Dr J. Stewart of Lakehead University, confirmed that graves and a habitation area on the sand flats at the mouth of the Dog River had been looted (Arthurs 1989d).

Further looting of the site occurred after his visit, and Arthurs inspected the site on his return from Sturgeon Lake, accompanied by W. Risi of the Ministry of Natural Resources. At least four late nineteenth- to early twentieth-century Native coffin burials had been badly disturbed, as had a habitation area, in which there were extensive deposits of ceramics, glassware, metal, and linear and circular arrangements of fire-cracked cobbles.

The Ministry of Natural Resources was enlisted to keep the site under aerial surveillance. In discussions with the Cemeteries Branch, Fort William Reserve, and other interested parties, it was agreed that, because of the late date in the season, the lack of funds, the unavailability of trained personnel, and the disturbed nature of the site, *in situ* stabilization was the most appropriate mitigative action.

Just prior to freeze-up, Arthurs, with the assistance of OAS volunteer Allyne Gliddon, mapped and photo-documented the disturbed burials and capped the graves with several wheelbarrow loads of sand. It was hoped that this action, together with deteriorating weather conditions, would end the looting until water levels on Dog Lake rose and covered the site.

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— 1989c. "Preliminary Report on the Parsons-Tomlinson Site Rescue Excavations, 1987." Manuscript on file, Ontario Heritage Foundation, Ministry of Culture and Communications, Toronto

— 1989d. "Vandalism at the Dog River Channel Burial Site, 1987." Manuscript on file, Ontario Heritage Foundation, Ministry of Culture and Communications, Toronto

ARCHAEOLOGICAL INVESTIGATION OF ONTARIO HERITAGE FOUNDATION PROPERTIES

Dena Doroszenko

BARNUM HOUSE, GRAFTON

Dena Doroszenko, archaeology coordinator of the Property Restoration Unit, conducted a three-day (17-19 August) salvage program at Barnum House, located on the north side of Highway 2, approximately 1.5 kilometres west of Grafton, Ontario. The field crew consisted of two people. The project was funded by The Ontario Heritage Foundation (OHF).

In 1987 the Township of Haldimand sought to undertake a project to construct an access road between Lots 26 and 27 of Concession 1, connecting to Highway 2. The Ontario Heritage Foundation took on the responsibility of identifying areas of potential archaeological concern, since the township's construction work would impact on OHF property. The OHF archaeologist, Dena Doroszenko, with a small crew, spent three days testing the area in the southwestern portion of the Barnum property. This area included the northeastern bank of an unnamed stream that runs through the property. Priority was set at determining the nature of the stratigraphy in this area and whether or not it had been used for the disposal of refuse during the initial Norris occupation of the property and the later Barnum occupation. Consequently, a number of units were shovel tested during the three-day excavation period.

The only evidence for structural features included deposits of brick rubble, uncovered in a number of test units, related to the demolition of the nineteenth-century smokehouse to the north of the test area. Over 400 historic artifacts were recovered dating to the late nineteenth and early twentieth centuries. Excavation of this area provided additional data to that conducted on the property by Gary Warrick in 1982 and 1986 for the OHF.

A further visit by the OHF archaeologist during the construction of the stream realignment and culvert uncovered evidence of several weeping-tile beds and drainage systems related to the house.

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Conservation Licence 87-85

MINISTRY OF CULTURE AND COMMUNICATIONS: ARCHAEOLOGICAL CONSERVATION ACTIVITIES IN SOUTHWESTERN AND SOUTH-CENTRAL ONTARIO

William A. Fox

Bill Fox conducted resource management site inspections during 1987 from 25 April to 14 December in the area bounded by Prince Edward County in the east, Pelee Island in the west, and Barrow Bay on the Bruce Peninsula. He made two small-scale excavations in Bruce County at the Hunter (BdHh-5) and Cripps (BhHj-17) sites. The objective of both projects was to obtain additional information about the Odawa occupation of the Bruce Peninsula and vicinity.

Fox also conducted four field inspections in response to reports and requests by provincial agencies. Three involved accidental discoveries of unmarked Native graves, and the fourth was a field trip to Pelee Island in the company of Ministry of Natural Resources staff to inspect a proposed natural heritage easement and a nature reserve. At the request of the Ministry of Natural Resources, Fox travelled to Pelee Island during April with Stuart Mallany of The Ontario Heritage Foundation and they visited the Fish Point Nature Reserve, where fire-cracked rock, a chert pebble core, and a notched cobble netsinker were noted along the west nature trail.

In response to a 1986 Ontario Provincial Police (OPP) unmarked grave report and a request from the landowner, Fox travelled to the Reid property at Salmon Point, Prince Edward County, in August accompanied by Dr Eldon Molto and Cheryl Dixon. Fractured human bone was scattered over the bottom of a small borrow pit which had been excavated into the side of a fossil dune. Intact human bone, including an articulated vertebral column, was found protruding from the west face of the pit.

The minimal investigative disturbance did not allow an accurate determination of the extent to which the burial feature had been removed previous to this inspection; however, the one-third or so remaining suggested that the prehistoric pit may have been circular and somewhat over 1 metre in diameter. A brief reconnaissance in the vicinity of the Reid cemetery led to the discovery of fire-cracked rock, burnt sand, and Pickering (?) ceramics in a dune blow-out approximately 50 metres to the south at the Fraser site (AlGh-63).

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Conservation Licence 87-87

Human remains were uncovered during the excavation of a sewer and watermain trench in the Lord Elgin Estates subdivision lands immediately north of the Nodwell village site in Port Elgin during September. A cranium with a damaged maxilla and a tibia were recovered by the machine operator, while a radius, rib, and other arm and chest elements were recovered through trowelling and screening of backdirt piles on 26 and 27 September. The range of skeletal elements suggests that the power shovel exhumed an articulated burial. Dr Michael Spence has concluded that the remains are those of a twenty-five to forty-year-old Native woman. Bone condition suggests that she may be an eighteenth- or nineteenth-century ancestor of the local Native people of Saugeen.

Another OPP investigation occurred on Six Nations Reserve, where a house foundation trench had exposed the grave of an elderly adult male. He had been buried in a flexed position, head to the southwest. Other graves had been discovered previously in the vicinity and all may relate to the fifteenth-century Miller village site (AgHb-10) immediately to the west.

Eight days were spent in Bruce and Grey counties. Survey techniques included surface inspection and a limited amount of shovel test pitting. This field work was a continuation of an annual Bruce County survey project initiated in 1984, focusing on the culture history of the Bruce Peninsula. Odawa settlement and subsistence patterns in this region were a specific area of interest. Survey activity in Bruce and Grey counties resulted in the discovery of three Odawa sites. The John Martin campsite near the mouth of the Sauble River dates to c. AD 1600, while the Balmy Beach site north of Owen Sound may be somewhat earlier. A rock crevice burial near Cape Dundas is also probably Late Woodland in age.

Continued excavations at the early seventeenth-century Cripps site, an Odawa encampment near Tobermory, produced additional Period 2 (c. AD 1600-20) glass beads and a portion of a bone centre-hole needle from an ash deposit. Test excavations were conducted at the Hunter site on Saugeen Reserve. Two occupations were identified, including a c. AD 1600 Odawa encampment and a terminal Middle Woodland camp radiocarbon dated to AD 850 ± 50 (uncorrected).

ARCHAEOLOGICAL INVESTIGATION IN THE PETUN AREA

Charles Garrad

Charles Garrad, with the intermittent assistance of a varying number of volunteer members of the Petun Studies Group, continued to observe and monitor known archaeological sites within the Petun archaeological zone (figure 1). In addition, various other activities were pursued for the purpose of raising local awareness of these resources and, particularly, to advocate the public preservation in a heritage park of a cluster of archaeological and geological features collectively named Craigleith Heritage Ridge.

Garrad visited seventeen registered archaeological sites in all. Of these, the most significant is the Pretty River site (BcHb-22), which was found ploughed for the first time in living memory. Considerable time was spent recording and mapping visible surface deposits and collecting exposed artifacts. The site was determined to be considerably larger and richer than had previously been thought. A representative collection of 3364 artifacts was obtained from the surface and on analysis was found to document an occupation dating from around the 1620s. This in turn eliminated the site as a candidate for the Jesuit period (1639-50) and caused a revision in the current interpretation of the chronological sequence of the three sites in the Pretty River Valley as follows:

Young-McQueen BcHb-19 (Concession 11, Lots 33-34), c.AD 1600-10

Pretty River BcHb-22 (Concession 12, Lot 34), c.AD 1610-30

McQueen-McConnell BcHb-22 (Concession 11, Lot 34), c.AD 1630-40, the Jesuit *St. James & St. Philip* of 1639.

Other volunteer work included an archaeological survey of Black Ash Creek within the Town of Collingwood in advance of proposed flood control modifications. The cost of this project was borne entirely by the licensee.

103 Anndale Drive, Willowdale, Ontario, M2N 3X3
Conservation Licence 87-23

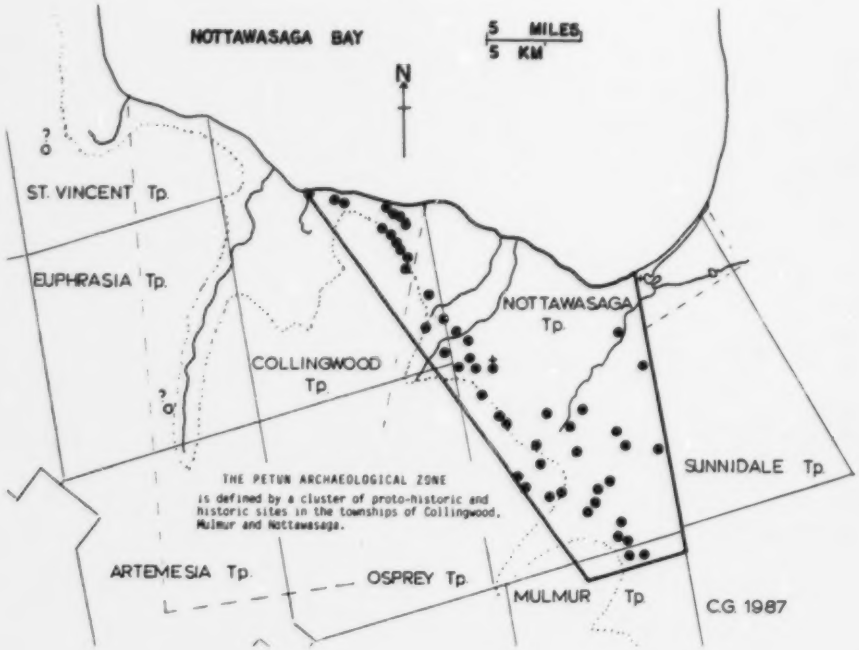

Figure 1: The Petun archaeological zone

SURVEY OF WELLINGTON COUNTY

Scott Jordan

Scott Jordan and Robert Perrins (licence 87-51) conducted a brief survey in and north of Guelph, during the summer of 1987. Landowners were contacted in the area in an attempt to locate unreported Native sites.

Two fields in the city of Guelph were investigated — one on the southwest corner of Edinburgh Road and College Avenue, and the other on the southwest corner of College Avenue and Stone Road. Both properties are owned by the University of Guelph. No archaeological material was observed at either location.

Because of time restraints, only a few landowners north of Guelph were contacted. The survey was started near the village of Ariss. The only results that were obtained were a report of a landowner's son finding an "arrowhead" and some "pottery" on a field adjacent to his property (these artifacts could not be located for study), and a report of an "Indian village" north of Rockwood (which turned out to be a field with a number of large, dark grey ashy areas, containing rotten wood). It was assumed that the areas noted in the latter field were remnants of a land clearing operation. One small chert fragment was found in this field, but it was not associated with the ashy deposits.

212 - 14 Home Street, Guelph, Ontario, N1H 2E5
Survey and Surface Collecting Licence 87-91

MINISTRY OF TRANSPORTATION: ARCHAEOLOGICAL INVESTIGATIONS IN THE SOUTHWEST REGION

Paul A. Lennox

The Archaeological Unit of the Ministry of Transportation, Southwest Region, directed by regional archaeologist Paul A. Lennox, conducted survey and salvage investigations along Highway 18 south of the City of Windsor in Essex County. Construction on Highway 18, between 1985 and 1987, involved only minor widening and realignment, but because of the concentration of prehistoric and early historic occupations along the Detroit River, an archaeological survey was undertaken to prevent possible impact to heritage resources. The Butt and Henderson sites, identified and mitigated in 1985, revealed evidence of intermittent prehistoric occupation from Early Archaic to the Late Woodland stage. These sites also included historic components representing Wyandot and Euro-Canadian occupations. The Butt site was within the general area referred to as the "Huron Cornfields" in the late eighteenth century, and scattered evidence of this settlement was documented. This site is also near the scene of one of the early battles of the War of 1812, and a small amount of military hardware was recovered.

Ministry of Transportation, 55 Centre Street, London, Ontario, N6J 1T4

Consulting Licence 87-26

LASALLE-LUCIER SITE

The LaSalle-Lucier site was excavated between 1986 and 1987, and represents two spatially distinct Western Basin Younge and Springwells phase settlements. Initially, excavations focused on a small strip of land immediately adjacent to the highway but most of the site was found under the highway roadbed while the crew was monitoring construction activities. The Younge phase component (c. AD 1100) is typical of the period, containing storage-pit clusters and warm-season fauna. The Springwells phase component (c.AD 1200) has provided a significant addition to our understanding of Western Basin settlement patterns with the identification of a palisaded settlement, approximately 0.1 hectares in size, containing several rows of interior posts representing one or more house structures. Subsistence data parallels the earlier Younge phase component and the Springwells occupation represents the earliest example of a nucleated Western Basin settlement recorded in Ontario.

SOUTH-CENTRAL ONTARIO

Because of the absence of staff archaeologists for other Ministry of Transportation regions, assistance was provided by the Southwestern Region on several projects in south-central Ontario. Archaeological survey work was initiated or continued on three major new road alignments in the Hamilton area: Highway 6 from Freelton to the 401, Highway 403 from Ancaster to Brantford, and Highway 6 from Hamilton to Caledonia. A number of sites were discovered during the preliminary surveys in 1987, and work will likely continue on these projects for several seasons.

NORTHWESTERN ONTARIO

In the Northwestern Region, survey over an area to be impacted by the proposed expansion of a Ministry of Transportation gravel pit established the extent of the Lakehead Complex Tower Road site north of Whitefish Lake. The site represents a large quarry and workshop for reducing taconite into transportable blanks. With the discovery of the large extent of this previously recorded archaeological site, plans for the expansion of the gravel pit have been abandoned.

Survey was also undertaken on a proposed air strip at Wunnummin Lake approximately 300 kilometres north of Lake Nipigon. Two sites were discovered along the narrow isthmus that joins the main body of Wunnummin Peninsula to the southern mainland. In the absence of diagnostic lithic artifacts or ceramics, Shield Archaic affinities are suggested for these temporary camps located on short portage routes. Several smaller surveys on the Sibley Peninsula, southeast of Thunder Bay, and on the Little Garden River, northeast of Sault Ste Marie, were also undertaken, but no additional archaeological sites were discovered.

ARCHAEOLOGICAL SITE INTERPRETATION THROUGH ETHNOGRAPHY: ISLINGTON RESERVE, WHITEDOG, ONTARIO

Robert Hugh McNally

Robert McNally conducted (taped) ethnographic interviews on the Islington Reserve and adjacent areas with Cornelieus McDonald and Chief Roy McDonald during the summer of 1987. The Islington Reserve is located approximately 65 kilometres north of the town of Kenora, Ontario, and 20 kilometres east of the Ontario-Manitoba border. The initial purpose of these interviews was to solicit information on behalf of Graham Malcolm Lewis, senior lecturer of geography, University of Sheffield, Sheffield, England, in preparation for his 1988 project (subsequently funded by The Ontario Heritage Foundation in 1988) entitled, "Searching in the English River Valley for the Indian referents behind early Euro-American geographical myths concerning western North America."

During the course of these interviews, numerous photos relating to the discussions were taken. The points of particular interest to Mr Lewis which arose in these interviews concern Pierre La Vérendrye's "River of the West" and information on "Mountain of Bright Stones," "Place where the water begins to Ebb and Flow," and "Little Red River." However, many more subjects were also discussed in the interviews.

The first interview took place on 28 July 1987 at Cornelieus McDonald's residence at Whitedog. Discussion focused on Mr Lewis's research interests, as well as on McDonald's knowledge of Ojibwa traditions, in order to develop future lines of inquiry.

The second interview was arranged at Fiord Bay, southeast of Separation Falls on the English River, on 4 August 1987. The purpose of this interview was to visit and discuss a "sacred" area along the shoreline.

The third interview took place on 11 August 1987 in part at the residence of Chief McDonald at Whitedog and in part on the Winnipeg River at the southwest edge of the reserve. Several "sacred" sites were visited and discussed.

The fourth interview, on 8 September 1987, was held at Cornelieus's trapper cabin along the Sand Lake Road near Separation Falls. A number of local Ojibwa legends and "sacred" areas were discussed, including locations of petroforms and "Thunder Nests."

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The fifth interview was conducted at Chief McDonald's residence on 3 October 1987. Dr Gary Granzberg from the University of Winnipeg was present during a discussion of interpretations of "symbolisms" and "legends."

The final interview on 11 October 1987 took place on a hill overlooking Fiord Bay. The main focus of discussion with Chief McDonald concerned local Ojibwa beliefs.

Information from these discussions may eventually be published, but at present it is providing a foundation for further ethnographic research of the community at Whitedog. The interviews have also provided McNally with considerable information for archaeological research focused in the area north of Kenora. For results of this work, see McNally's reports for 1988 and 1989 in this volume.

CONSERVING ASPECTS OF NATIVE CULTURE THROUGH PICTOGRAPH DOCUMENTATION IN NORTHWESTERN ONTARIO

John K. Pufahl

Large numbers of pictographs occur in the Canadian Shield along the vast waterways of the Kenora District in northwestern Ontario. These examples of Canada's earliest art represent many facets of Native life and their documentation allows permanent recording of these images for future study of their significance in Native culture.

Since 1985, John Pufahl has located and recorded ten pictograph sites and one sacred boulder, all of which have been assigned Borden numbers. The most important is the Bunyan Lake site (DiKg-1), recorded in 1985. Here, several images on one panel are easily distinguishable, while other images contain only faded traces of red ochre. In addition, many features often found singly at other sites — such as an echo-producing grotto, an overhanging protective ledge, hand smears, and an offering ledge — are all present at the Bunyan Lake site. The presence of two cigarettes in an appropriate niche shows that this site remains sacred, and tobacco was also wedged into a vertical crack in the panel.

Other sites south of Eagle Lake between Dryden and Kenora will be examined and documented at a later time. Photographs, measurements, and tracings will be made of the paintings and their locations recorded on topographic maps. Reports from Pufahl's Native guide and from an elder from the Eagle Lake Reserve suggest that these sites are situated on precontact as well as historic canoe routes used for seasonal migration, hunting, and ceremonial travel by the Native people. Many of these sites contain images that are unusual both in quantity and in clarity. In general, rock paintings include identifiable figures associated with the Midewiwin (Grand Medicine Society), hunting ritual, clan identity, territorial claims, sexuality, and storytelling.

The record of this early art is not only significant from an archaeological perspective but will also inspire the continuation of certain aspects of Native culture. Documentation of rock art conserves fragments of Native heritage that contribute to the survival of the Algonqian nation.

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Conservation Licence 87-96

Because mutual trust was gained with some residents during Pufahl's research excursions, the locations of several other types of sites were reported to him. They included the sites of a precontact battle, a burial, a rice harvest, a hunting ceremony, and an occupation.

POTTERY, PROJECTILE POINTS, AND PICTOGRAPHS: A LOOK AT IGNACE'S PREHISTORY

Dennis Smyk

In 1987 Dennis Smyk conducted a study near Ignace in northwestern Ontario emcompassing parts of the watersheds of the Brightsand, English, and Turtle rivers. All expenses were borne by the licensee.

The purpose of the survey was to document known and reported pictographs, to conduct surface studies of likely habitation sites, and to search for new pictograph locations.

Forty-one sites were recorded, two of which were pictographs. The cultural affiliation encompassed Archaic, Laurel, Selkirk, Blackduck, and historic. An outstanding find was a trihedral adze from the Archaic period.

Four other studies have been conducted in the Ignace area, the first to the establishment of Sandbar Provincial Park (1974), the second with the West Patricia Project (1979-80), the third as part of the Northwestern Ontario Rock Art Project (1982-4), and the fourth prior to the establishment of Brightsand River Park (1986).

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Conservation Licence 87-62

SURVEY AND CONSERVATION ACTIVITIES IN THE DISTRICTS OF KENORA AND THUNDER BAY

Bruce Tomlinson

The licensee is a conservation officer with the Ontario Ministry of Natural Resources. His patrol area covers the north end of the Ignace Forest District.

Two sites are being monitored on a continuing basis: the Groves site (DlJa-1), an atypical late Blackduck burial mound, and the Parsons/Tomlinson site (EaJp-2). The latter site has large amounts of animal bones that are continually being eroded as well as pottery representing the Blackduck period. One piece of Laurel pottery was also recovered. Early and late fur-trade period material is also present on the site.

During 1987 three new sites were documented: a traditional portage along the Flindt River (Albany watershed); a portage on the Sturgeon River (English River watershed); and a precontact campsite across from the Parsons/ Tomlinson site.

Other heritage-related activities include input into various forest management agreements, the Brightsand Park proposal, Indian Lake cottage development, and the Ignace Economic Development Plan. Tomlinson also made a presentation on archaeological conservation to twenty-five Native students at Savant Lake and installed a display on archaeology at an open house at the Ignace Ministry of Natural Resources. The display was seen by over 300 visitors.

Future field season activities will be concerned with discovering and documenting new sites. The licensee would like to locate the two original rival fur posts on Sturgeon Lake where early confrontations took place between the Hudson's Bay Company and independent pedlars.

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Survey/Conservation Licence 87-108

CONSULTING ACTIVITIES

ALGONQUIN ASSOCIATES: MAGPIE RIVER HYDROELECTRIC DEVELOPMENT PROJECT

Ann L. Balmer

HISTORIC SITE DOCUMENTATION

The major project conducted by Algonquin Associates in 1987 was the documentation of the remains of two historic industrial sites on the Magpie River north of Wawa. This work was conducted as part of the Heritage Resources Assessment for the Hydroelectric Development Project on the Magpie River by Great Lakes Power (Algonquin Associates 1986, 1987). The proposed development involved the construction of three dams and associated hydroelectric generating facilities.

Of the many prehistoric and historic sites identified during the initial field investigation, two were threatened by the development and warranted further documentation. These consisted of the structural remains of a timber railway bridge and an early hydroelectric generation site at Steephill Falls.

METHODOLOGY

A detailed history of the construction, operation, and abandonment activities was prepared for each site. The historical research was focused primarily on engineering plans, reports, and correspondence concerning the design, construction, and operation of the main structures of the sites. Scale line drawings were prepared showing cross-sections and plan views of the major structures. The drawings were produced to show the engineering features of the structures as originally constructed, since no comprehensive site plans were found in the contemporaneous literature. Foundation and structural remains of supplementary features were also mapped and photographed. The importance of the heritage resources identified on each site was assessed using four main criteria: historical associations, technological and design features, aesthetic and environmental features, and cultural value and integrity. The mines associated with these sites were only superficially investigated since they were not directly affected by the development.

THE SITES

Both the Algoma Central and Hudson Bay Railway Magpie Branch Line (1910-27) and the Steephill Falls Hydroelectric Power Development (1911-27) were constructed to meet the requirements of the

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Magpie and Helen iron mines in the area. At the height of its production, the Magpie Mine was the focus of a thriving community with a population of over 300 people, and a church, school, and other facilities.

Magpie River Railway Bridge

This is a timber pile bridge built by Algoma Central Railway (ACR) in 1909-10. Original plans for the ACR standard timber pile bridge were compared with the Magpie River bridge. The latter was found to be typical of the design used by the ACR between 1910 and 1912. The Magpie bridge has a straight span of 75.3 metres and an elevation of 5.1 metres above the low-water level. During the period of production (1914-21), trains carried into the area everything that was required for the operation of the mine and community, and carried out thousands of tons of ore a year. By 1921, the Magpie River bridge was one of only two timber structures left on the spur line, the other bridges having been backfilled with waste rock from the mine. The track and ties were removed in 1927 after abandonment and comprehensive salvage of usable materials at the Magie Mine in 1926. In 1987 the bridge was still standing, although in very deteriorated condition. This bridge is in the area to be inundated by the Steephill Falls reservoir.

Steephill Falls Power Plant

The hydroelectric facility was developed to provide a reliable, inexpensive power supply for the Magpie and Helen iron mines north of Wawa (see figure 1). Construction was undertaken between 1911 and 1913.

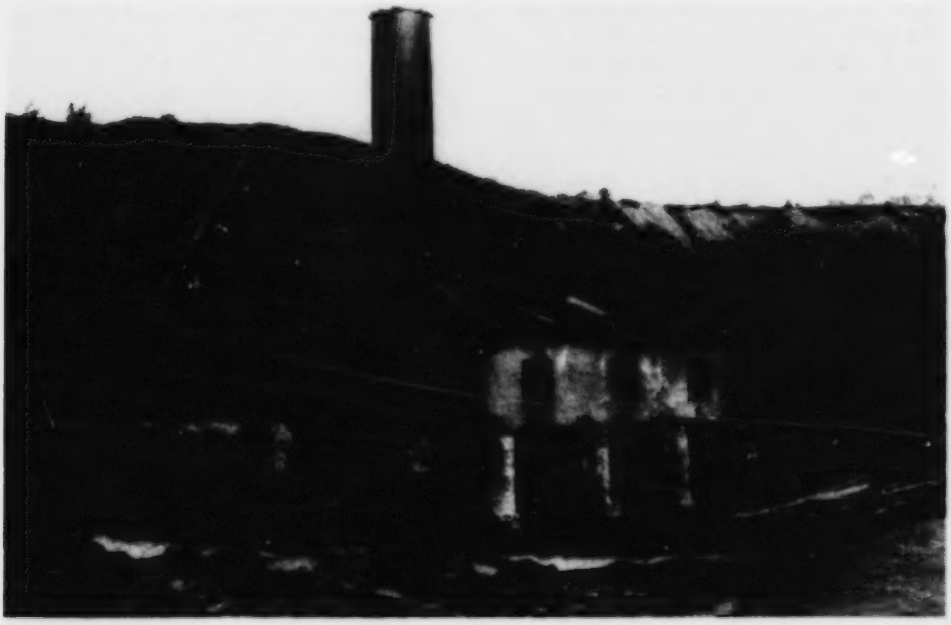

Figure 1: View of Steephill Falls Power House looking upstream from the southwest. Note the penstock extending up through a rock cut in the hillside.

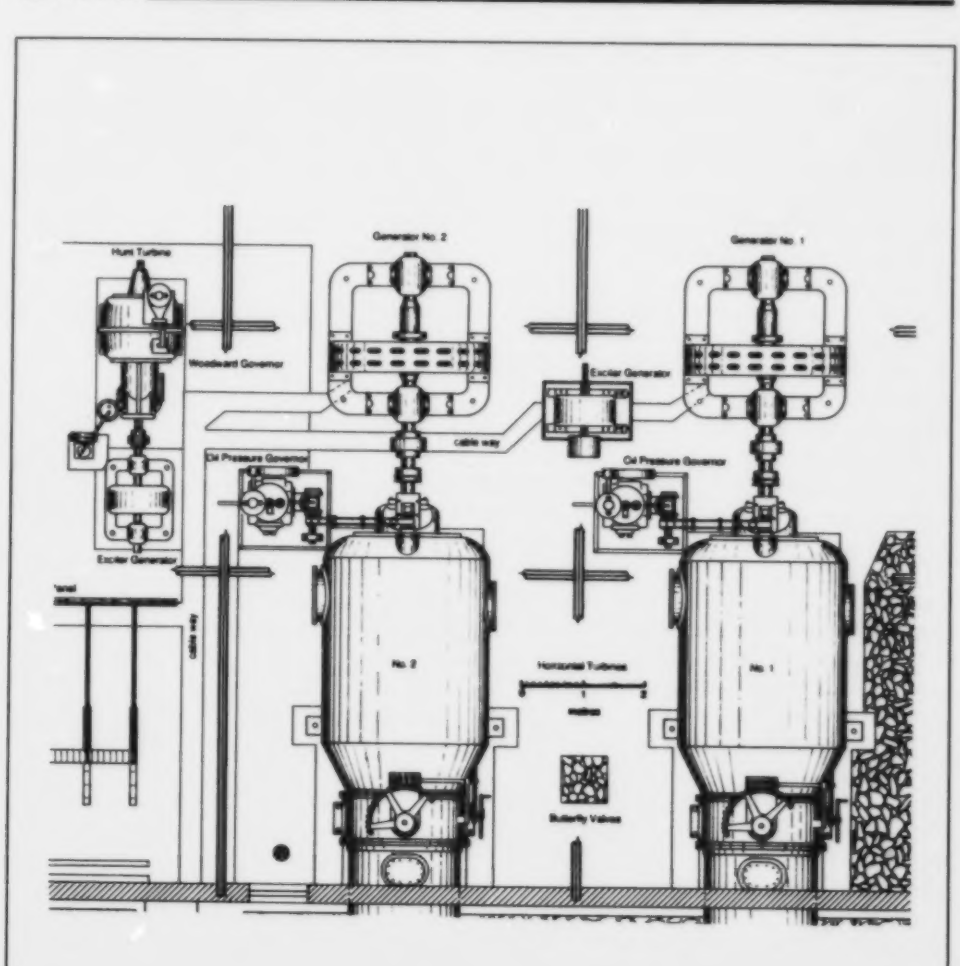

Figure 2: Steephill Falls Power House, detail of floor plan showing the turbines, governors, and generators

The dam is an Ambursen buttress type structure, 73 metres wide, rising 9 metres above the river, creating a narrow headpond that reached less than 1 kilometre upstream when full. The buttress dam design was unique in Ontario at the time of construction. It was built with a minimum of reinforced concrete and was an economical design in instances where the costs of material transported over long distances were high. The power house is a 14.8 by 17.8 metre yellow brick structure with a medium gable roof. The 8-foot diameter riveted iron penstock delivered water to two 1200 HP horizontal double runner turbines and 1100 volt generators. The plant was active from 1913 to 1927. In 1987, although the power house superstructure is deteriorating, most of the dam, penstock, surge tank, and the large machinery still remain as an interesting industrial archaeological ruin. Although this site is adjacent to the new power plant location, it will not be demolished by the construction.

The work at Steephill Falls is significant as the first detailed documentation of the many small-scale early power plants in northern Ontario constructed to facilitate mining. The obvious difficulties and hardships involved in its construction, operation, and maintenance in this inaccessible, isolated setting reveal much of the pioneering effort associated with early twentieth-century mining in northern Canada.

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CONSULTING WORK OF SCARLETT JANUSAS AND ASSOCIATES: SOUTHERN ONTARIO

Scarlett E. Janusas

The consulting firm of Scarlett Janusas and Associates Inc. conducted four archaeological resource assessments in the Town of Oakville and the Hamlet of Campbellville. In addition, one mitigation project was conducted at the SkyDome in Toronto. Field crew of one to four individuals worked under the supervision of project manager Scarlett Janusas. All five projects were funded by developers.

OAKVILLE SUBDIVISION

The archaeological resource assessment of subdivisions 24T-76018 and 24T-79009, Town of Oakville, resulted in the discovery of a single isolated findspot. This findspot, a unifacial scraper of Onondaga chert, was located in the same locale as AiGv-5, the Broken Thermos site, reported in the late 1970s by David Arthurs. Extensive test pitting immediately surrounding the known site area failed to recover additional cultural material. No other cultural materials were recovered during the assessment.

The archaeological resource assessment of plan 24T-86038, Town of Oakville, resulted in the discovery of two isolated findspots. The first findspot consists of two white refined earthenware sherds of stamped design. Background research suggests that these artifacts may have been associated with a structure located on the west side of McCraney Creek as indicated on an 1877 map. The second findspot is a single flake of Onondaga chert. Test-pitting in the area immediately surrounding both findspot locations failed to recover additional cultural material.

The archaeological resource assessment of plan 24T-86020, Town of Oakville, resulted in the discovery of a single prehistoric findspot and a cluster of historic ceramic artifacts. The prehistoric artifact is a utilized flake of poor-quality Onondaga chert. This flake was found about 200 metres to the east of a small creek. Further intensive survey in the vicinity failed to locate any additional material.

The cluster of historical ceramics was located east of a tree line adjacent to the site of an historic structure (no longer extant). The material consists of several mid nineteenth-century ceramics and would appear to relate to the former structure. Additional historical research indi-

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cated that the property was sold to George Dorland in 1814. The assessment roll for 1819 indicated that a house was constructed as early as 1816. In view of the fact that settlement in the Township of Trafalgar began in 1807, this property represents the site of one of the earliest settlers in the area. On the basis of the historical significance of the property, additional mitigation was recommended for the 1988 field season.

CAMPBELLVILLE ASSESSMENT

The archaeological resource assessment of plan M-44, in Campbellville, Halton Region, resulted in the discovery of three historic findspots. Further test pitting in the area of these three isolated findspots failed to recover additional related cultural material. The three findspots were not associated with any visible structure or foundations, nor did archival research indicate the former presence of historic structures at these locations.

TORONTO SKYDOME SHIP

During January and February 1987, Scarlett Janusas and Associates Inc. conducted an assessment of the remains of a ship located during construction activities at the site of the Toronto SykDome. The study was undertaken with the assistance of Peter Englebert. The ship, not *in situ* at the time of the investigation, was originally buried in the east section towards the CN Tower at the level of construction, approximately 30 metres below the present-day ground surface.

The purpose of the work was to describe and, if possible, identify the ship. It was anticipated that these data would greatly add to knowledge of shipbuilding activities on the Great Lakes.

The ship remains are represented by a keel section, including a rabbet and stem end of the vessel. The vessel section measured approximately 5.5 metres in length and averaged 68 centimetres in width. We believe that the ship was scrapped and used intentionally for landfill purposes. Unidentified historical remains exposed at the ship's original location were probably not associated with the ship. It is unlikely that the ship remains represent a whole vessel buried intact.

Study of the remains indicates that the vessel was wooden and hulled with a metal shoe running along the keel. The shoe was applied in sections. The angle of the rabbet to the keel suggests a steep hull profile near the stern section, expanding to an almost flat-bottomed hull profile towards midship. No evidence remains to indicate the method of propulsion, vessel function, or cargo carried.

Vessel date, determined by date of infilling operations, predates 1890. It is possible that the vessel was built ten to twenty years before 1890, based on the evidence of refitting and the historical record for the normal life span of vessels.

ARCHAEOLOGY DIVISION, REGIONAL MUNICIPALITY OF WATERLOO: RESULTS OF THE 1987 FIELD SEASON

Scarlett E. Janusas

The Archaeology Division of the Regional Municipality of Waterloo conducted twenty archaeological resource assessments in 1987: seven in the City of Kitchener, five in the City of Cambridge, two in the City of Waterloo, four in the Township of North Dumfries, and two in the Township of Wilmot. In addition, one mitigation project was conducted in the City of Cambridge. One to three field crew worked under the direction of Scarlett E. Janusas and/or John D.A. MacDonald and all projects were funded through developers.

Of the twenty archaeological resource assessments, three in the City of Kitchener (30T-81025, 30T-86025, and plan 67R-767) and one in the Township of North Dumfries (30T-76019) produced no evidence of former prehistoric or historic use. No further archaeological work was recommended for these properties.

Rather than list the results in the remaining sixteen projects, the author has selected four sites — Sandrock, Mulholland, Broomfield, and Wren — to illustrate the varied resources of the Regional Municipalilty of Waterloo. Readers who are interested in further information should review the licence report and individual reports housed in the Resource Centre of the Regional Municipality of Waterloo.

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SANDROCK SITE

The archaeological resource assessment of plan 30T-79001, City of London, resulted in the discovery of two loci of the Sandrock site, AiHd-66, in the south-central portion of the site. These two clusters are separated by approximately 30 metres. It was recommended that the site area be completely ploughed and allowed to weather to permit a controlled surface collection and, following the mapping of the artifact distribution, that the property be monitored during topsoil stripping.

The investigation of the Sandrock site demonstrated the value of complete ploughing as opposed to strip ploughing. It also showed that there is an increased likelihood of recovering cultural material when a property that has been ploughed is allowed to "weather" over a long period of time. Details of the mitigation can be found in the 1988 licence report.

MULHOLLAND, BROOMFIELD, AND WREN SITES

The archaeological resource assessment of the Cowan Industrial Subdivision, City of Cambridge, resulted in the discovery of twenty findspots and three archaeological sites. The findspots include both isolated historic and prehistoric materials. The three sites include the Mulholland site (AiHb-41, an historic site dating to c.1830-50 associated with the extant—now demolished—residence), the Broomfield site (AiHb-40, an historic domestic site dating to c.1830-50), and the Wren site (AiHb-39, a multicomponent prehistoric site).

Additional mitigation was recommended for all three sites. For the two historic sites, the intent of mitigation was to recover two types of data: 1) construction details of any structures encountered, and 2) data on lifeways as reflected in the material culture. The intent of the Wren site mitigation work was to determine the exact nature, type, and extent of the site.

The Mullholland site is situated directly behind a standing residence known as the Cowan Farm. Seventeen 1-metre squares were excavated to the level of undisturbed subsoil. All excavated squares produced artifacts, although the artifacts tended to be located towards the centre rear of the house. Further field survey of the adjacent ploughed fields was also conducted in 1-metre intervals.

The analysis of the material culture indicates that the site dates from the late nineteenth century to the early twentieth century and was inhabited by people of both sexes. A preponderance of white granite tableware suggests that these formerly "expensive" wares (c.1850-60) had become less expensive in the late nineteeth century and were probably used as "everyday" tableware.

The Broomfield site, located directly east of Franklin Boulevard and west of a large marshy pond, was also subject to randomly placed test squares. Nine 1-metre squares were excavated to the level of undisturbed subsoil. All excavated squares were productive, but lesser concentrations of artifacts were found on the level elevation of the site. A subsequent visit to the site after topsoil stripping and shovel shining produced only one amorphous 4-metre wide feature, which, with further testing, produced only a few artifacts. Analysis of this cultural material indicates a date range of between 1860 and 1870, approximately thirty years later than the original assessment had indicated. This difference in dating may suggest that the Broomfield site represents cultural material from an earlier homestead.

The Wren site was surveyed in 2-metre intervals under optimal viewing conditions. Many findspots of both a prehistoric and an historic nature were recovered, but only one actual clustering of artifacts was apparent. Seven 1-metre square test units were excavated in this cluster, of which four produced historic artifacts and one piece of prehistoric material. No settlement pattern was evident. Random shovel shining of the area was conducted following topsoil stripping, but only tree burns were apparent.

The nature of the site, diffuse over a large area, suggests that the general area had been used repeatedly over many centuries for exploitation of nearby resources. Materials recovered from the survey are both prehistoric and historic. The prehistoric assemblage dates from the Early Archaic to the Early Woodland period.

ARCHAEOLOGICAL SERVICES INC.: ARCHAEOLOGICAL ASSESSMENTS IN THE PROVINCE OF ONTARIO

Ron Williamson

Archaeological Services Inc. (ASI) is a Toronto-based archaeological consulting firm incorporated in 1980. In 1987 ASI conducted more than fifty pre-development assessments under the general direction of Dr Ron Williamson. Exploratory investigations or salvage excavations were conducted at fourteen other sites, and archaeological master-plan studies were initiated for two municipalities. All of this research resulted in the registration of 177 new archaeological sites. In addition to seven permanent staff members, twenty-three people were employed seasonally on projects concentrated in the Hamilton, Kitchener-Waterloo, Niagara, and Metropolitan Toronto areas.

SALVAGE EXCAVATION OF THE CORRADO SITE

The Corrado site (AhGx-94), one of five sites discovered during a pre-development subdivision assessment conducted in Hamilton in 1986, was excavated by a crew of six under the site direction of Carol Ramsden. The site was characterized by a dense surface scatter of material over a 2400-square-metre area. Most of this area was excavated to sterile subsoil in 1-metre-square units. Approximately 9500 artifacts were recovered, including both small Early Archaic bifurcate base points and Late Archaic Innes-like points, indicating a multicomponent occupation. The artifacts were subjected to a detailed analysis using ASI's Dbase III Plus lithic analysis system developed by Stephen Thomas. The analysis has resulted in the identification of four hearth areas and a significant amount of spatial variation in the distribution of implements and debitage. More specifically, both the number of formal tools and the occurrence of use-related attributes on expedient tools were found to vary among hearths. The ratio of primary to secondary debitage was found to correlate with the relative numbers of curated tools. Moreover, the distribution of implements, and in particular perforating tools, in relation to hearth centres would appear to be similar to that documented by Lennox (1986) for the Innes site (AgHc-5).

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ARCHAEOLOGICAL RESOURCE ASSESSMENT OF CLOVERLEAF VILLAGE

A total of 103 sites and eighty-nine findspots were registered by ASI on the 284-hectare Cloverleaf Village property in Ancaster, Ontario, which was surveyed by a crew of four under the field direction of Carol Ramsden. Sites dating to the Archaic through Late Woodland periods were documented, suggesting that the area had been used intensively in prehistoric times. The Wade site (AhGx-19), an Early Iroquoian component (c. AD 1280) first recognized by Art Howey, was excavated by a crew of twelve under the direction of Ms Ramsden. Excavations resulted in the recovery of portions of at least thirty-eight ceramic vessels and a significant faunal assemblage. These were found in association with a poorly defined living structure. Nevertheless, faunal and settlement data suggest that the site was briefly, and likely seasonally, occupied by a small group in order to exploit the local resources. The excavation of the site resulted in an important contribution to our understanding of variation in regional settlement-subsistence systems during the Early Iroquoian period.

SALVAGE EXCAVATION OF THE VANDERBURGH SITE

Several excavations of early to mid nineteenth-century Euro-Canadian homesteads were also conducted. Most notably, Martin Cooper supervised extensive archaeological explorations of the Vanderburgh property (AlGu-34) in Richmond Hill, in advance of relocation of the existing structure. The project was initiated by the Richmond Hill Local Architectural Conservation Advisory Committee since it was thought that archaeological investigations might contribute to the delineation of the early occupational history of the property, given the absence of relevant historical documents. A number of pit features and an extensive midden were excavated at the rear of the house. Evidence of an earlier occupation of the property by Captain James Fulton was confirmed by a rich early nineteenth-century midden deposit located beneath the existing structure. The calculated mean ceramic date of this feature is 1805 and the minimum date of construction of the subsequent Vanderburgh house is placed at 1832, based on a coin recovered from excellent archaeological context within the midden. The Vanderburgh study, therefore, is a fine example of the contribution that archaeology can make to understanding the history of a property or region.

MUNICIPAL MASTER PLANS OF ARCHAEOLOGICAL RESOURCES

Archaeological Services Inc. was also retained by the Town of Richmond Hill to prepare a comprehensive study of the archaeological resources extant within its municipal boundaries. While one of the objectives of the study was to prepare a site inventory, more important objectives included identifying zones of archaeological potential within the municipality, devising a strategy for the identification of new resources in advance of land disturbance, and formulating a conservation plan for all known and newly discovered sites. A phase 1 background research document was also prepared by ASI for the Town of East Gwillimbury as the initial component of its master plan of archaeological resources. Both master-plan studies have been designed within a four-phase framework which will ultimately lead to the implementation or integration of archaeological resource protec-

tion and interpretive development within the respective official plans.

SALVAGE EXCAVATION OF THE SNAKE HILL SITE

The most complex project undertaken by ASI in 1987 involved the excavation of the Snake Hill cemetery (AfGr-6) in Fort Erie, Ontario. In April 1987 human skeletal remains, as well as scattered prehistoric artifacts, were encountered during the excavation of a foundation for a house adjacent to the Lake Erie shoreline. ASI was retained by the Town of Fort Erie to assess the nature and extent of these remains. When it was discovered that the site was a cemetery associated with the American occupation of Fort Erie during the War of 1812, an international team of archaeologists, medical and military historians, conservators, and physical anthropologists was assembled under the direction of Dr Williamson. The team consisted of individuals from a number of Canadian universities and agencies as well as the United States Armed Forces Institute of Pathology, the Smithsonian Institution, and the Inspector General's Office of the United States Army.

Twenty-eight primary interments of individuals (figure 1) who died during the summer and fall of 1814 were exhumed during six weeks of intensive fieldwork. Four features contained non-articulated human bone and amputated limbs (figure 2) and have been defined as medical waste pits. The artifact and button assemblages recovered with twenty-two of the individuals indicate they were buried in American military or civilian garments. American nationality is also argued for the remaining six individuals on the basis of their archaeological context within a cemetery associated with an historically documented American medical field facility. This identification of these twenty-

Figure 1: Sgt Lawrence Llewellyn of the United States Armed Forces Institute of Pathology photographs the Snake Hill burials

eight skeletons was conducted prior to their precedent-setting repatriation to the United States with full military honours in June 1988. In summary, the Snake Hill site project focused the attention of an international and interdisciplinary group of scholars on one aspect of the War of 1812 and, in so doing, stimulated a broader research initiative which will have far-reaching results (Pfeiffer and Williamson 1990).

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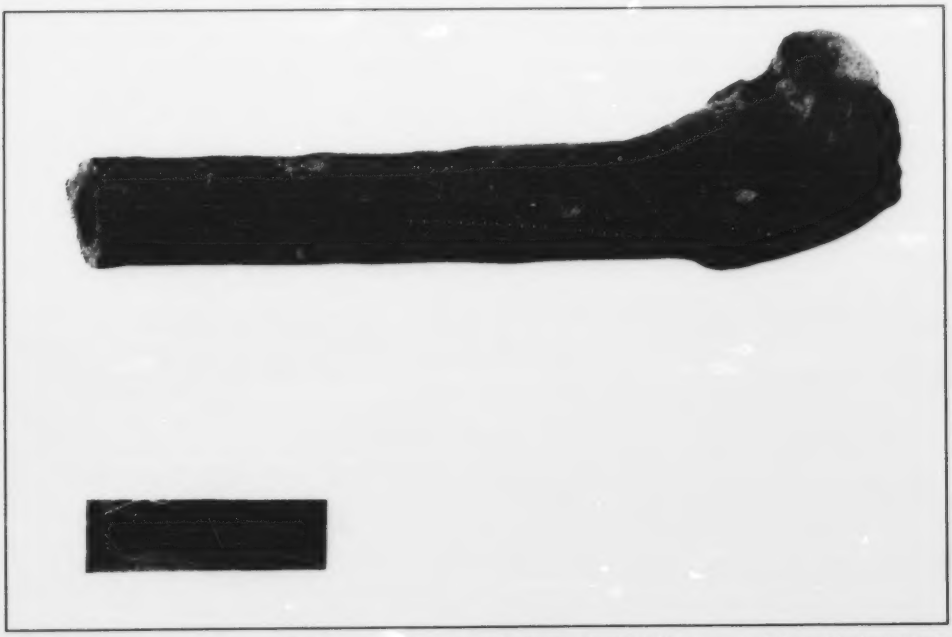

Figure 2: An example of a surgical amputation of a right humeral midshaft, excavated from Medical Waste Feature 9

FIELD SCHOOLS

ARCHAEOLOGICAL FIELD SCHOOL, WATERLOO COUNTY JAIL, KITCHENER

Scarlett E. Janusas

The Archaeology Division of the Regional Municipality of Waterloo conducted an archaeological field school at the historic Waterloo County Jail (AiHc-18) in the City of Kitchener. The site supervisor was John Triggs and the project manager was Scarlett E. Janusas. There were thirty-two participants, ranging in age from twelve to fifty-eight. The project was funded by the Regional Municipality of Waterloo, enrolment fees paid by the participants, and an equipment grant provided by the Ministry of Culture and Communications.

The purpose of the field school was to provide participants with an appreciation of the history of the jail within the context of nineteenth-century society as well as an understanding of the role that archaeology plays in bringing the past back to life. The first day of the teaching program served as an orientation and information session to prepare the participants for the experience of excavating an historic site. Students were taught proper excavation methods and the reasons for excavation. The intent of the program was to demonstrate that archaeology is a controlled exercise in which a site is taken apart piece by piece and artifacts collected in context are later used to reconstruct the lifeways of the people who lived or interacted at the site. The remaining four days of the five-day program consisted of on-site instruction in excavation, mapping, survey using a theodolite, photography, and artifact processing and identification.

The Waterloo County Jail was built in 1852 and is bounded by Queen, Weber, and Frederick streets in the City of Kitchener. Various improvements and modifications were made to the jail over subsequent years including the addition of a wooden fence around the jail, iron window gratings, and a cistern in 1853. In 1861 a 22 by 32 foot structure was built to act as a kitchen/storeroom outside and a 14-foot-high stone wall was constructed around the prison yard. This kitchen/storeroom was the subject of the archaeological field school investigation. Other improvements included sinking of a well in 1874, addition of the jailer's residence in 1878, installation of pipes and gas fixtures in 1885, replacement of a wood fence with a brick wall, connection to the city's sewer system in 1882, heating the buildings with steam in 1893,

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Field School Licence 87-113

and conversion of the turnkey's residence in 1930 to additional cells. The jail was closed in 1978.

The scholarly objectives of the excavation were to establish the dimensions of the kitchen/storeroom in the largest courtyard by locating two opposing corners; excavate selected interior areas in order to obtain both structural and functional data; analyse artifact assemblages to identify activity areas or non-architecturally visible structural elements; develop a detailed site stratigraphic sequence to establish the relationship between exterior and interior deposits structural elements; and locate, if possible, the burial shaft of the last prisoner to be hanged and buried within the jail, Reginald White.

The field school excavation resulted in the recovery of some valuable information. First, the dimensions of the structure were found to be 6.1 by 12.2 metres, as distinct from the 6.71 by 9.76 metres listed in historical records. Second, excavation of the interior structure indicated the possible location of an interior partition, and the distribution of artifacts on the southeast side of the structure (a concentration of ceramic sherds and a paucity of bone) seemed to confirm that the burned feature found in this area was a porch. On the interior of the structure, a concentration of architectural hardware and the presence of deteriorated wood fragments located within two pit features suggest the presence of a wooden superstructure. Third, the Harris matrix method of stratigraphic sequencing (Harris 1981) allowed for the division of the site into periods based upon construction episodes. Several phases of the site's history were related to the kitchen/storeroom of 1861. These included the remains of a porch, a drainage trench, exterior ground surfaces, interior floor level, and two features, identified as privies, located in the centre of the structure. One badly deteriorated post probably represents the only building which predated the 1861 structure. Historical records suggest this may be part of the palisade built in 1852 to enclose the earliest jail yard. Finally, despite excavations in the area where Reginald White is purportedly buried (within the kitchen/storeroom), no indication of an internment was found.

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BRUCE FIELD SCHOOL: EXCAVATIONS AT THE MASON SITE

James Molnar

The Outdoor Education Centre of the Bruce County Board of Education ran a three-week field school at the Mason site (BeHh-6) in July 1987 with twenty-three grade 12 students. James Molnar directed the field portion of the course, assisted by Judith Stewart and Ed McCann. Clarke Birchard supervised the course. Funding was provided by the Bruce County Board of Education and the Ministry of Culture and Communications.

The previous owners of the property, George Mason and his family, collected artifacts from the surface of the site and turned them over to Birchard and the County Museum when the school board purchased the property in 1971. Birchard notified William Fox of the Ministry of Culture and Communications, and he surface collected the site in 1983. The site, also referred to as the Boat Lake site, is multicomponent with Archaic, Woodland, and historic Odawa components spread across a series of knolls.

The site itself lies adjacent to Boat Lake, a part of the Sauble River drainage. This area is the narrowest part of the Bruce Peninsula, and Bowman (1975) has documented its use as a portage route from Georgian Bay to Lake Huron in the nineteenth century. Boat Lake and the portage may also be depicted on Bressani's *Novae Franciae Accurata Delineatio* map of 1657 (Bowman 1975: 11-16). The site is thought to be an Odawa camp along this portage.

Fox suggested that the field school excavations concentrate on the area of Odawa occupation, which covers 0.3 of a hectare and is closest to Boat Lake. A total of thirty-nine 1-metre-square units were excavated with hand equipment. A wide range of artifacts was recovered, including chipped lithics, ceramics, faunal remains, and a single trade bead. The chert types represented are Fossil Hill, Kettle Point, Onondaga, Scott Quarry from the Upper Peninsula of Michigan, Gordon Lake from Superior East, and one flake of Hudson's Bay Lowland chert. Identified faunal specimens are woodchuck and hare that are probably intrusive, falcon or hawk, and moose. The moose is represented by a tooth and possibly several pieces of calcined long bones. Dates for the site are suggested by a red tubular trade bead dating to 1630-50 and by two trade axes collected from the

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site by Mr Mason. One axe is an early seventeenth-century type and the other comes from later in that century (Fox: personal communication). Four shallow post moulds and one sterile shallow subsurface pit were found, but they do not appear to represent a structure. No middens were found.

The ethnic affiliation of the inhabitants of the Mason site during the contact period can be inferred from a number of data sources. The site lies well within the ethnohistoric range of the Odawa for the early seventeenth century (Waisberg 1977). The sourced lithics correspond with those found at other Odawa sites such as Dunk's Bay (Fox: personal communication). The artifacts, particularly the scrapers, correspond with those found at the Odawa Glen site at the northern end of the peninsula (Wright 1981).

The Mason site appears to have been deposited over a period of time during intermittent occupations related to use of the portage across the base of the peninsula.

Finally, a gun flint found on the surface and identified as early nineteenth-century British in origin (Joseph Last: personal communication) is evidence of a later use of the portage route. Bowman's historical study of the portage route concluded that Euro-Canadian missionaries, traders, and Indians who lived on the Lake Huron shore all used the portage to cross the base of the peninsula at this time (Bowman 1975).

The field school will continue again in 1989, to delineate the area of occupation and search for further remains of a settlement pattern.

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ACTIVITIES OF THE ARCHAEOLOGICAL RESOURCE CENTRE, TORONTO BOARD OF EDUCATION

Karolyn Smardz

In 1987 the Toronto Board of Education's Archaeological Resource Centre conducted two excavations in the east end of the City of Toronto. One was at the Ashbridge site (AjGt-1) under the supervision of Arthur Pegg and, later, Susan Reynolds, and the other was at the O'Sullivan site (AkGt-36) under the supervision of Peter Hamalainen. Both sites fit in well with the research objectives – to excavate sites that provide information about the lifeways of nineteenth-century lower-to-middle income Torontonians. The Ashbridge site and the O'Sullivan site provided data on a farm and an inn complex, respectively, during the course of development of east Toronto from a rural to an urban community.

THE ASHBRIDGE SITE

The Ashbridge site is located on the north side of Queen Street East, one block east of the intersection of Queen Street and Greenwood Avenue. The excavations at the site lasted from mid-May until the end of October 1987 and were funded by the Toronto Board of Education with financial assistance from The Ontario Heritage Foundation. Half-day field programs were conducted on the site for school groups in the spring and fall and for community groups in July and August. Volunteers were accommodated throughout the field season.

Students participating in the half-day programs and inexperienced volunteers excavated deposits which were composed of fill or were badly disturbed. When these deposits were dug through, the squares were designated "sensitive" and the excavation was continued by Archaeological Resource Centre staff and experienced volunteers.

The site dates to 1795, when the Ashbridge family, which immigrated from Pennsylvania, received a crown grant from Lieutenant-Governor Simcoe. The site area has remained in Ashbridge family possession since that time.

The main excavation area consisted of the westernmost portion of the present Ashbridge property. Archival research indicated that during the nineteenth century this area contained buildings associated with the Ashbridge farm. An early twentieth-century house, torn down in

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Field School Licences 87-100, 87-101

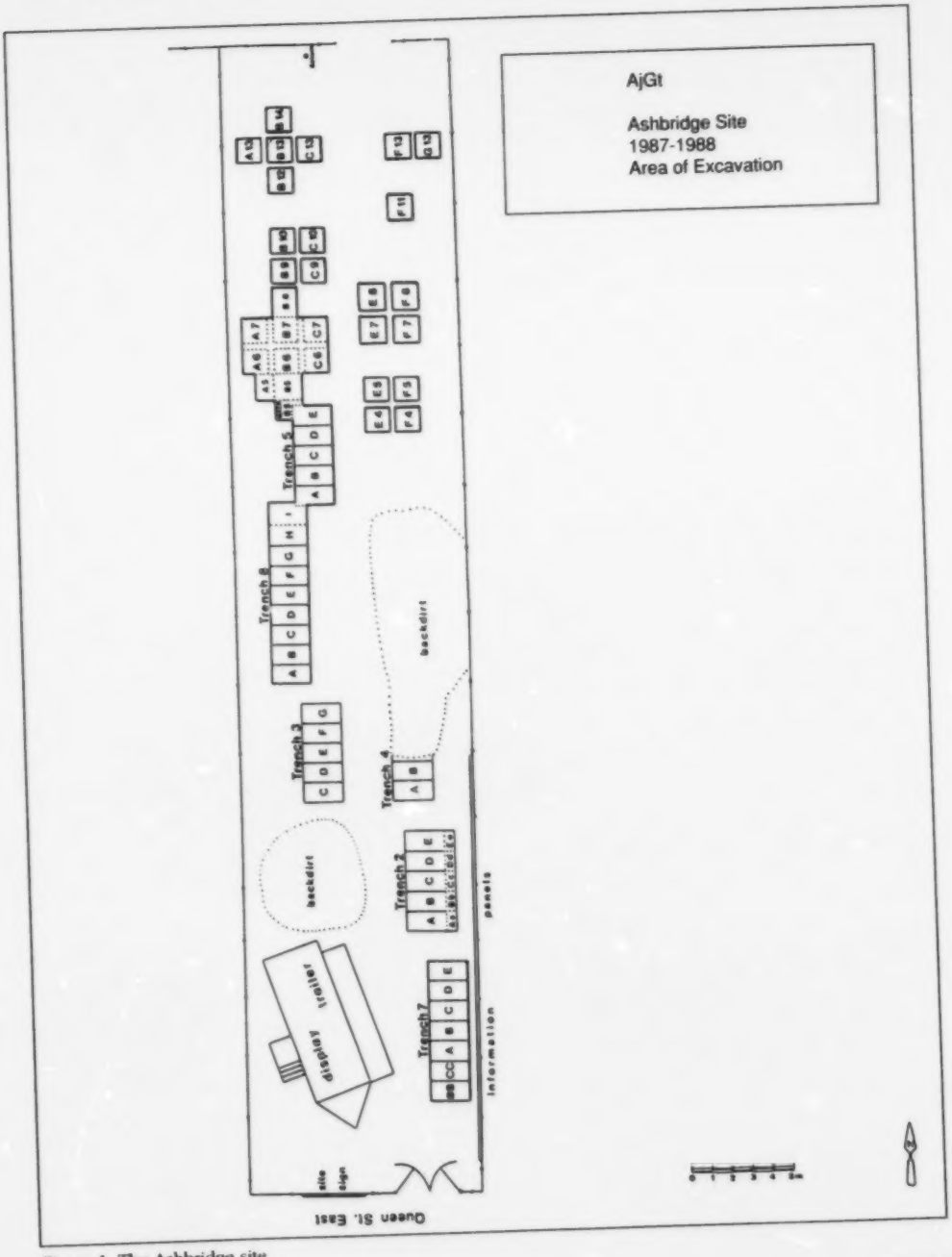

Figure 1: The Ashbridge site

the 1970s, was also located in this area of the site.

In 1987 the excavation was concentrated in the southern portion of the site area. By digging long trenches, each measuring 2 metres in width and which were divided at 1-metre intervals to create 1 by 2 metre squares, the excavation succeeded in delineating the extent of the twentieth-century deposits (figure 1). The trenches also confirmed that nineteenth-century deposits lay undisturbed beneath the twentieth-century strata.

O'SULLIVAN SITE

The O'Sullivan site, also excavated in 1987 by the Archaeological Resource Centre, is on the north side of Kingston Road approximately half-way between Main Street and Woodbine Avenue. The excavation came about as the result of cooperation among a number of groups and individuals. The site was slated for development and the local heritage group, the East Toronto and Beaches Historical Society, requested the Toronto Historical Board to conduct an archaeological field school on the site. The board, in turn, passed the request to the centre. Staff from the centre conducted a visual survey of the property in February 1987. The observations were encouraging and, with the permission of the property owners, Guided Investments Limited, excavation was planned for the summer of 1987. Funding was provided by the Toronto Board of Education and the Toronto Historical Board.

The site was originally an inn complex of at least four buildings. Of these, only one was still standing at the time of excavation. The site is named after its most famous occupant, Daniel O'Sullivan, an Irish immigrant who was one of the supporters of William Lyon Mackenzie.

The excavation lasted from the beginning of July to the first week of September. During the first six weeks the annual archaeological field school for high school students was offered at the site. Individuals and groups of volunteers were accommodated at the site after the completion of the field school.

The site consists of two parts, the backyard, north of the building, and the ravine immediately north of the backyard. The backyard was expected to provide architectural and artifactual material dating from the beginning of the inn complex to modern times, while additional artifactual data would be recovered from the hillside midden formed in the ravine. The backyard was excavated using squares measuring 1.35 metres^2, and the hillside midden by 1-metre-wide trenches of various lengths (figure 2).

Unfortunately, the strata in the hillside midden proved too disturbed to yield meaningful data. While different layers were noted, all produced a mixture of nineteenth- and twentieth-century artifacts. However, the layers and features discovered in the backyard could be dated from prior to the 1880s to modern times. The remains of a possible shed and a variety of features connected with both nineteenth- and twentieth-century household activities were located and identified.

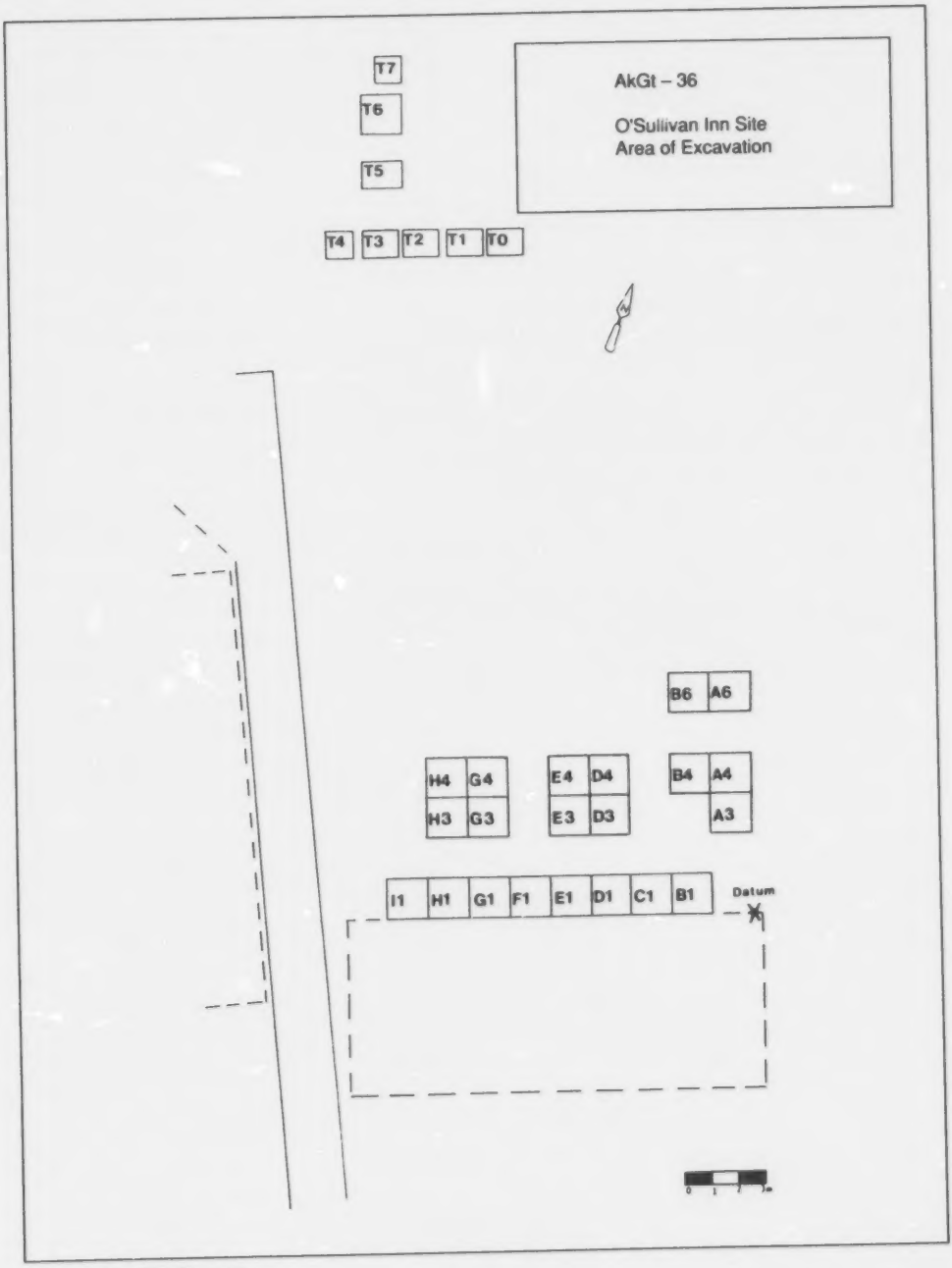

Figure 2: The O'Sullivan site

SITE/PROJECT SPECIFIC ACTIVITIES

FIELDWORK AT LAKE TEMAGAMI

Diana Lynn Gordon

In 1987 Diana Gordon conducted nine days of fieldwork at Lake Temagami in the District of Nipissing. This deep-water lake is located near the Mixed Forest/Boreal Forest ecotone, 80 kilometres north of North Bay. On this occasion, Gordon addressed specific questions arising from the 1986 excavation of the Three Pines site (CgHa-6 Druid's Cove). On 22-24 June, along with J.H. McAndrews of the Botany Department of the Royal Ontario Museum (ROM) and two botany students, she collected plant samples and extracted a pollen core from the peat bog beside the site. On 24-29 August she collected pedological data. In addition, Gordon and one assistant surveyed the Cross Bay area. The Ontario Heritage Foundation provided major funding for 1986 and 1987 (ARG 333 and 337); additional support was provided by a grant from McMaster University's Northern Science Training and Research Committee. The Social Sciences and Humanities Research Council also supported this work through a doctoral fellowship.

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The Three Pines site (CgHa-6), registered by T. Conway of the Ministry of Culture and Communications in 1981, was excavated over a period of seven weeks in 1986 by Gordon, one supervisor, and two crew members under licence 86-03 (Gordon 1986, 1987). The objective of this work was to develop a cultural sequence through detailed excavation and stratigraphic analyses of this multicomponent site (cf Butzer 1982). A total area of 101.5 square metres was excavated. Each 1-metre-square unit was trowelled in 3-centimetre levels, with all artifacts and features recorded by level. Artifacts include 6584 fragments of faunal bone, 240 lithic tools, 5856 pieces of debitage, 1377 pot sherds, 17 kaolin pipe fragments, 2 gunspalls, 1 gunflint, and modern metal, glass, and plastics. Among the many settlement features were basins of gray, hard-packed, ash-coated sand and concentrations of calcined faunal bone in fire-reddened soil. These features are hearths and living floor remnants formed by centuries of seasonal, hunter-gatherer occupations. Among the animals procured were beaver, deer, moose, bear, canis sp., marten, loon, and grouse (Prevec 1987; cf Gordon 1989). The cultural periods identified are Archaic, Initial

Woodland (Laurel), Terminal Woodland, and historic.

In 1987 geoarchaeological data were collected to answer questions about site formation processes (cf Butzer 1982): How and when was the site landscape formed? When did peat begin to form? Have lake levels changed over time? The following reconstruction is based on soil analyses by Geof Burbidge of the Geology Department, University of Ottawa, and pollen core analyses by McAndrew (cf Gordon 1989).

The Three Pines site is located on a baymouth bar, formed by longshore drift reworking and depositing sandy glacial material. This process maintains a spit 500 metres further east where the Sand Point site (CgHa-1) is situated (Conway 1986). In a depression between the two sites, a peat bog began to form at the coring location at 6400 BP ± 80 yr (WAT-1987). By using this as a minimum date for the establishment of the terrace/bog complex, it is suggested that Three Pines could have been occupied by at least mid-Archaic times. However, the site was somewhat different then. Since the 4-metre-long core was composed of peat, this suggests that Lake Temagami was once 4 metres lower and has been steadily transgressing since the mid-Holocene. This would cause inundation of former shorelines and the upland encroachment of the bog. About 20 metres of the site's front edge may now be under water. Lake transgression helps to explain why some Archaic components are seemingly closer to the lake, and why the nineteenth-century components are further inland.

Surveys were conducted to determine if the geographic setting of the Three Pines site was unique and to develop an initial understanding of prehistoric settlement patterns along current lakeshores. In 1987 two new sites were found at Cross Bay (CfHa-37 and 38). The Cross Bay site (CfHa-37) was surface collected; artifact provenance was recorded by reference to a 2-metre-square grid (Gordon 1989). This brief survey augmented the 1986 reconnaissance of Lake Temagami's central shoreline. At that time, six new sites (CfHa-31 to 36) were found in six days. Based on site location, size, and artifact classes represented, these eight sites comprise a vein quartz quarry and a lithic processing station, travel camps, and longer-term habitation sites.

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1987 FORT YORK ARCHAEOLOGY PROJECT

R. Scott James

Historic Fort York was a British military garrison founded in 1793 by Lieutenant-Governor John Graves Simcoe and occupied throughout the nineteenth century. Unfortunately, little is known about the fort between its founding and its destruction twenty years later during the War of 1812. The fort was rebuilt on its present site between 1813 and 1815 and seven of the eight extant structures date to this period. In addition, a number of other structures were built and subsequently demolished during the nineteenth and early twentieth centuries. In many cases, the exact locations of these structures have not been determined.

The extant structures are deteriorating. In 1987 the Toronto Historical Board began a restoration program that will eliminate the causes of deterioration and upgrade site utilities. Restoration will be completed in 1993, the City of Toronto's and Fort York's bicentennial.

Restoration will ensure the survival of the fort's buildings, but some of the work endangers the archaeological resource. Cooperation among the architects, curatorial staff, and archaeologists minimizes the impact on this resource. In some cases there is the opportunity to do research; in others the need to salvage comes first. Either provides an opportunity to learn more about the past.

In 1987 the Toronto Historical Board undertook a thirty-week excavation under the direction of Dr Donald A. Brown. Funding for the project was provided through the Ministry of Citizenship and Culture (CFIP grant) and the City of Toronto.

The first phase of excavation focused on the extant 1815 brick officers' quarters. The object of this phase of work was to provide information regarding the sequence of architectural alterations to the basement and the perimeter of the officers' quarters in order to help restore the building to its 1838 configuration. However, the project was equally concerned with architectural and social details pertaining to the building and its various uses from the date of initial construction to the final configuration of the building as a museum in 1934.

The entire basement of the officers' quarters was excavated by natural levels and features to a depth of 45 centimetres.

Toronto Historical Board, Stanley Barracks, Exhibition Place, Toronto, Ontario, M6K 3C3

Excavation Licence 87-64

This work revealed a series of nineteenth-century superimposed floors, walls, drains, and catchbasins. The original 1815 wooden floor level contained artifacts and faunal remains relating to its use as a kitchen. Around 1827-8 an outside area adjacent to the east side of the building was in-filled. Over 35,000 artifacts (ceramics, glass, buttons, military equipment, and faunal) dating to the period c.1800-28 came from this deposit. The artifact assemblage from the basement changed radically after 1870 when the buiding began to be used as married quarters. This change in use is reflected in large numbers of new ceramic and glass types, along with the presence of toys.

During the second phase of work, 12 square metres were excavated in the centre of the fort in the area of the 1800-13 lieutenant-governor's residence. An area of similar size was excavated in the southwest bastion at the former location of an 1813-c.1841 barracks/canteen (more recently the location of a gun platform dating to 1861-c.1900. These excavations assessed the archaeological potential and stratigraphy of the western half of the fort and indicate the potential impact of below-grade disturbances resulting from long-term stabiliation and site improvement projects. These excavations also provided guidelines concerning time requirements for careful archaeological excavation in this portion of the fort.

Testing in the centre of the fort revealed evidence of clearly stratified, relatively unmixed deposits 1.2 metres deep. A thick midden layer was exposed above subsoil. This layer contained a wide variety of pre-1813 ceramics, glass, small items, and a diverse faunal assemblage which includes a high percentage of wild fauna. Overlying deposits dated to c.1813-20 and c.1820-60.

The final phase of fieldwork involved test excavations in the southwest bastion and revealed the north stone footings and possible porch of an unidentified pre-c.1813 structure, the overlying 1861 gun platform and cobbled path to the guns, and 1880-1922 period refuse layers. The construction of the gun platform removed all traces of the 1813-42 barracks/canteen which once stood at this location.

Preliminary analysis of the 87,109 artifacts, 2000 photographs, 150 maps and drawings, and 800 pages of field notes was conducted through 1987-8. A research grant from The Ontario Heritage Foundation in 1987 provided for an analysis of the ceramic data from the southwest bastion test (Gerrard 1988). New techniques for computer data entry and management were developed in 1987 to facilitate future work.

The 1987 excavation was the first of a multi-year project at the fort which continues to be an integral part of the stabilization, restoration, renovation, and interpretation of the site.

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EXCAVATION AND REASSESSMENT OF THE KANT SITE, RENFREW COUNTY

Barry M. Mitchell

Between April and November 1987, intermittent testing and excavation on part of the Kant site was conducted by a crew of three directed by B.M. Mitchell of Deep River, Ontario. The Kant site was described by W.J. Wintemberg (1917) as consisting of a two-lobed deposit on the north and east shores of Mud (Wilber) Lake. The site occupies adjacent parts of two Borden blocks (Borden 1952), which fortuitously coincide with a topographical change between the two lobes. The 1987 work was confined to the eastern block (BjGg-1), or ridge.

The object of the work was to locate undisturbed features below the plough zone and other evidence to identify all groups that had occupied the site, and also to determine the extent of the deposits. A formal report of the National Museum of Canada excavation in 1947 documented that the site had been occupied by Point Peninsula groups (Emerson 1955). Local collections held by the Reeves and Kant families include stone axes, adzes, gouges, ulu-like slate objects, and Late Woodland rimsherds, indicating possible occupation by other cultural groups.

Two features were encountered in 1987 (Mitchell 1988). The first is a large, dark-stained roasting pit which contained bone, shell, animal teeth, charcoal, and a pseudo scallop-shell decorated rimsherd. Faunal and floral material obtained from dry screening and flotation have been submitted for analysis. A charcoal sample has also been submitted for radiocarbon dating.

The second feature consists of a dozen rounded opaque quartz pebbles distributed over an oval area of 3 by 2 metres at a depth of 25 centimetres (Initial Woodland cultural floor level). The pebbles, of various diameters under 25 millimetres, appear to have been collected specially since the soil immediately surrounding the feature is devoid of similar pebbles. The purpose of this feature has not been determined. However, a similar collection of quartz pebbles is illustrated by Ritchie (1965) and interpreted by him as part of a turtle-shell rattle assembly.

Work in 1987 established that the artifact distribution on the ridge extends southward to the north shore of the Bonnechere River, which flows out of

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Excavation Licence 87-73

Wilber Lake, thus making the east lakeshore deposit about 1000 metres long. This southern area has been registered as BjGg-4 (Duquette Site).

Artifacts recovered during the 1987 field season include plain, dentate stamped, rocker stamped, and pseudo scallop-shell decorated pottery, copper items of decorative and functional use, lithic points and scrapers, bone, charcoal, and mineral samples, and a French gunflint. The depths of various diagnostic artifacts indicate some plough disturbance and/or other intrusive mechanisms. A socketted copper point and several gouges in local collections suggest the presence of an Archaic occupation on this site, while the pottery indicates the presence of an Initial Woodland occupation. The gunflint provides evidence of European contact.

Further excavation is planned for the upcoming seasons.

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EXCAVATION AT THE MAYNARD-McKEOWN SITE, A ST LAWRENCE IROQUOIAN VILLAGE

James F. Pendergast

Excavations were funded by the Heritage Merrickville Foundation with a Community Facilities Improvement Program grant from the former Ministry of Culture and Citizenship and by James F. Pendergast with a federal grant from the Social Sciences and Humanities Research Council. The work took place over the period between 18 May and 18 September 1987 under the supervision of James F. Pendergast, director, and Dawn Wright, assistant director (Pendergast 1988).

The Maynard-McKeown site is located in Lot 11, Concession 2, Augusta Township, Grenville County, some 15 kilometres west of Prescott (figure 1). The site was recorded in 1914 by William J. Wintemberg (1936:121) for the National Museum of Canada. No excavations were undertaken until 1987.

Settlement pattern data from the twenty-three houses excavated in 1987 indicate that the core village at Maynard was expanded spatially once to accommodate at least two incoming groups of people. Initially this core village, which included two sweat lodges and a visitors' longhouse in the north plaza outside the core village palisade, occupied approximately eight-tenths of a hectare (2 acres).

It is believed that the core village population was augmented in two phases. Phase 1 involved the removal of the single-line palisade which protected the core village and at least two of the core village longhouses. This permitted the construction of four new longhouses. All four of the new longhouses were built at right angles to the core village houses, including those that had been demolished to provide space for the phase 1 population expansion.

The phase 2 population expansion involved the removal of one of the smaller longhouses constructed in the phase 1 expansion and the construction of four new longhouses, three of which are among the longest excavated. The phase 2 houses were built parallel to the original core village houses; that is, at right angles to the houses built in the phase 1 expansion.

By far the majority of the pits excavated were located in the longhouses. Indeed, the areas between the houses were relatively undisturbed. In addition to the numerous small and relatively shallow hearth-related pits in the longhouses,

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Excavation Licence 87-29

there were a number of large, deep pits in several longhouses. These pits, some of which are 1.5 metres deep (5 feet), are interpreted to have been seed-corn storage pits.

Invariably these large seed storage pits are located under the bunk-line. This suggests that the custody of the seed-corn cache, a commodity vital to village survival, was the responsibility of the particular family that occupied that apartment in the longhouse. There can be little doubt that the family entrusted with this custodial responsibility would be among the most trustworthy in the longhouse. Possibly the longhouse matron reserved this duty for herself. This would accord well with her responsibility for managing planting, tending, and harvesting the crops. In this event the clustering of these seed-corn storage pits at one end of the longhouses at Maynard suggests that the families in charge of the seed corn lived at the "senior end" of the house. Presumably each of the matron's married sisters and daughters occupied a fire at a distance from the matron in keeping with their familial seniority. This social patterning could explain the gaps in the hearth spacing in houses 1 and 2; both these houses are phase 2 expansion houses. Possibly the long spaces between otherwise equally spaced hearths were reserved for yet unmarried daughters or sisters to permit them to occupy a location in the longhouse commensurate with their seniority in the family when they married — Richards work (1967) notwithstanding. The allocation of family space in the longhouses in this manner would, in part at least, become a factor in the social structuring of longhouse lifestyle.

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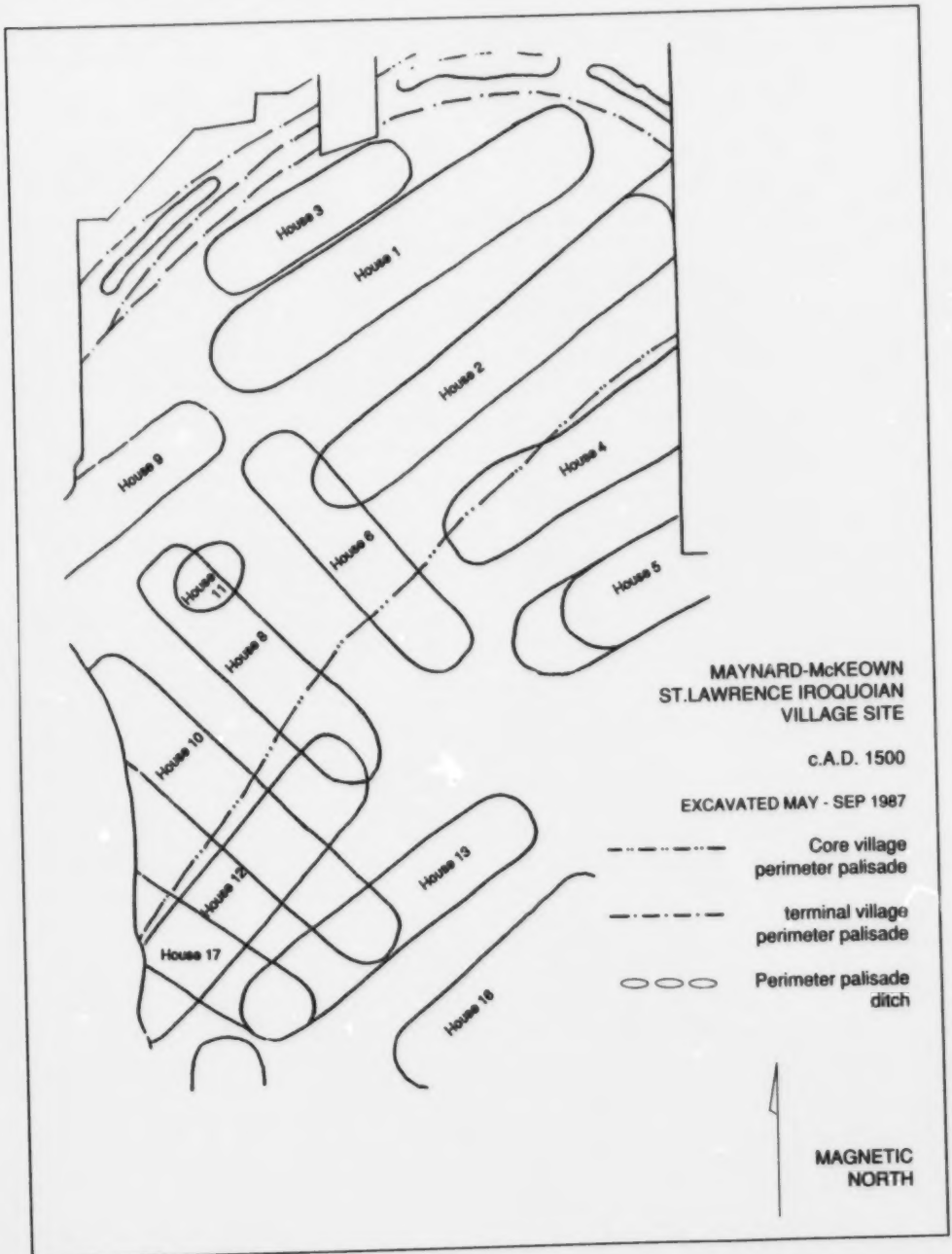

Figure 1: The Maynard-McKeown site

EXCAVATION AT THE PATRICIA KOZAK SITE, THUNDER BAY DISTRICT

Joe D. Stewart

Joe D. Stewart conducted excavations at the Patricia Kozak site (DdJm-3) located on the north shore of Lower Shebandowan Lake approximately 70 kilometres west of Thunder Bay. Two to four volunteers assisted during the five field days in 1987. This work was supported by a grant from the Alumni Association of Lakehead University.

The site, situated on private cottage property near the village of Shebandowan, was first investigated in 1986, when the property owners donated a surface collection to Lakehead University. At that time the site was mapped and a test pit confirmed the existence of subsurface archaeological materials. The 1986 material was subsequently described and compared with other collections from the Shebandowan Lakes area (Matousek 1987). The 1987 project consisted of salvage excavations totalling 5 square metres in two areas between the cottage and the lake shore that were slated for property improvements. Horizontal control was maintained within 1 by 1 metre units divided into quadrants, and vertical control was maintained by 3-centimetre levels. All excavated matrix was water-screened through quarter-inch mesh.

Preliminary examination of the 1986 and 1987 excavated materials confirmed the impression conveyed by the donated surface collection. A Late or Terminal Woodland occupation is indicated by abundant potsherds of Blackduck type. No ceramics or lithics diagnostic of earlier periods were encountered. The lithic collection is dominated by debitage of varied, mostly regional, silicious rock types. Native copper occurs as nodules and in the form of awls and other implements. Burnt and unburnt faunal bone is well preserved but highly fragmented. Analysis of approximately one-half of the faunal collection by the Zooarchaeological Identification Centre (National Museum of Natural Sciences, Ottawa) has revealed the presence of several small and large mammal species, as well as water fowl, fish, and turtle.

Historic materials recovered range from twentieth-century objects to objects of the nineteenth century or earlier. They include percussion caps, a lead shot ball, and glass trade beads.

Cultural materials were found down-

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Excavation Licence 87-10

wards to a glacial till substrate which occurred at a maximum of approximately 12 centimetres below the surface. Late Woodland sherds, faunal bones, and historic materials were concentrated in the upper levels but no clear archaeological stratification was discerned. Charcoal was also abundant in the upper levels, but whether it represents forest fires or cultural fires could not be determined. No clearly defined features were encountered. In the soil profile, a upper, dark, relatively humic zone graded gradually downwards into tan silty matrix. The soil profile was somewhat irregular, indicating turbation by natural and, probably, human agents.

Preliminary study suggests that DdJm-3 is generally similar to other Late or Terminal Woodland sites in the Thunder Bay area. Its principal significance may prove to lie in the faunal remains as indicators of subsistence and seasonal patterns. In agreement with the property owners, it was decided that future work should concentrate on further salvaging of areas slated for landscaping or construction.

REFERENCE

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EXCAVATIONS AT THE EARLY PALEOINDIAN UDORA SITE, GEORGINA TOWNSHIP, YORK COUNTY

Peter L. Storck

Peter Storck directed a six-week excavation project at the Udora site, an Early Paleoindian occupation site located approximately 7 kilometres southeast of Lake Simcoe in Georgina Township, York County. The field crew consisted of eleven people: an assistant field supervisor (Ingrid Kritsch) and ten university-level students. The project was funded by the Royal Ontario Museum (ROM) and a grant from the Social Sciences and Humanities Research Council of Canada (SSHRCC).

The Udora site was discovered by the ROM in 1979 during the course of survey work along the former strandline of glacial Lake Algonquin on the eastern margin of the Simcoe lowlands. In 1980 extensive excavations funded by the ROM and SSHRCC were conducted in five activity areas on the cultivated portion of the site to determine the cultural identity of the occupants, the geographic relationship of the site to the Algonquin strandline, and the "structural organization" of the activity areas, both individually and with respect to one another. The purpose of the 1987 project was to determine whether undisturbed areas of the site might exist among the farm buildings and associated stock corrals and, if so, to search for archaeological features that would provide faunal and/or floral material for identification and dating purposes. These data would provide a physical and environmental context for Early Paleoindian occupation in the province and the Great Lakes region generally.

The project succeeded in discovering and excavating a new Early Paleoindian activity area, designated Area A-East, situated in a stock drive lane and adjacent poultry pen. The activity area consists of two artifact concentrations each about 6 metres in diameter and separated by a zone of "low productivity" about 3 metres wide. The two artifact concentrations produced a similar range of artifacts consisting, in total, of one complete and thirteen fragmentary fluted points of the Gainey/Clovis type, eighteen preforms, three beaked scrapers, four gravers, two wedges, one drill (from a reworked point), one possible net sinker, seven side scrapers, and at least forty-eight and possibly as many as eighty end scrapers (the final count will depend on the num-

Department of New World Archaeology, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, M5S 2C6

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ber of refitted fragments), many with graver spurs and hafting notches. The raw material is predominantly Fossil Hill Formation chert (Collingwood area) but significant amounts of Balsam Lake and Onondaga chert are also present. Although disturbed by ploughing, both artifact concentrations produced subsurface features. The northern concentration produced abundant debitage and some artifacts adjacent to a large, partially buried, glacial erratic boulder that may have served as a seating/resting area or wind break. The southern concentration produced a feature delimited by a high concentration of debitage, some artifacts, and a large quantity of calcined animal bone that may provide material for both species identification and radiocarbon-dating.

Additional survey work was conducted along a 32-kilometre stretch of the Algonquin shoreline to augment the work conducted in 1979 and 1980. This resulted in the discovery of a new Early Paleoindian site and other scattered evidence of Early Paleoindian activity.

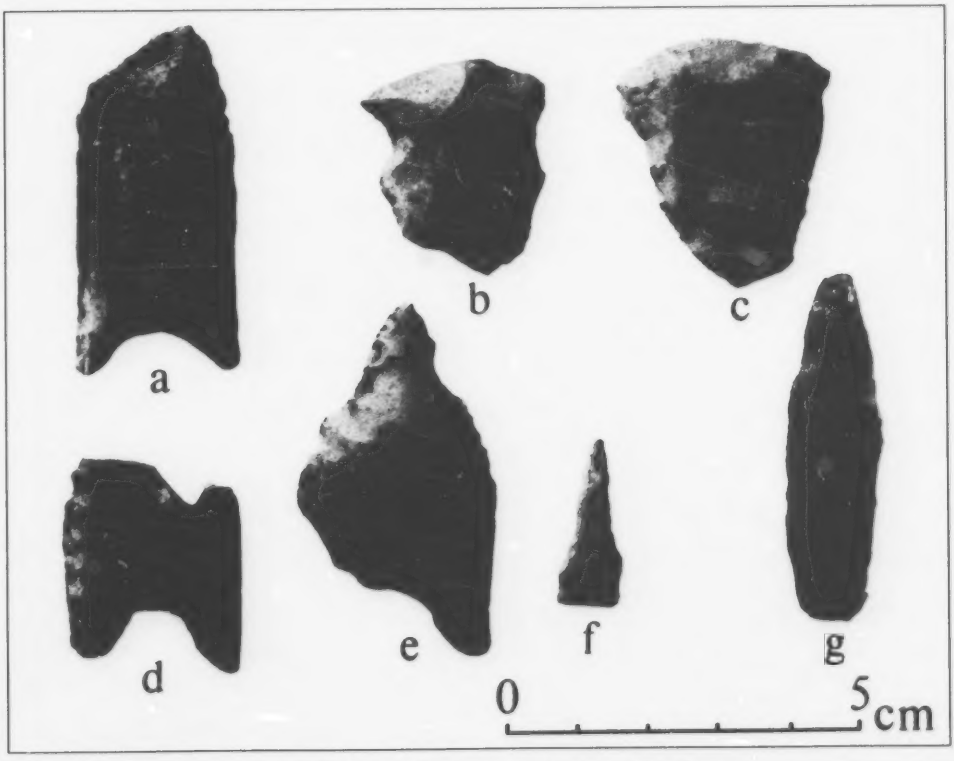

Figure 1: Selected artifacts from the Udora site: (a) base and mid-section of fluted point; (b, c) end scrapers; (d) base of fluted point; (e) basal fragment of fluted point reshaped into bifacially worked drill; (f, g) beaked scrapers

UNDERWATER SURVEYS

LAKE ERIE UNDERWATER SURVEY

Mike Johnston

Between May and August 1987, video records were obtained during the course of several dives on both known and unknown wrecks in the study area from Long Point to Point Pelee. The field crew consisted of five volunteers. The work was privately funded by the individuals involved.

Six new wrecks were discovered near Point Pelee, all situated in about 21 metres of water. Three of the wreck sites are those of wooden sailing vessels, while the remaining sites are those of steamers. All of the activities carried out were preliminary inspection dives to view conditions of the sites and their potential for future underwater video.

The sailing vessels are all relatively intact, with most deck equipment remaining in place. Numerous fish-nets are shrouded about the wrecks. The fact that they are undisturbed suggests that little or no vandalism has occurred on these sites.

Of the steamers, one is relatively intact. It has been identified as the *Marshall Butters*, a turn-of-the-century lumber hooker, a lumber-carrying vessel. There are indications that it has been vandalized. The other sites are in poorer condition, with much of the decking collapsed and extensive amounts of discarded fish-nets strewn about the wreckage.

Another wreck site was discovered approximately 6 kilometres out of Port Stanley harbour. This wreck is that of a three-masted wooden schooner, approximately 55 metres in length and lying in 21 metres of water. A full complement of coal remains aboard and the vessel is in good condition, with little or no damage to the deck or hull. The windlass and other equipment have become unattached from the deck and lie strewn about the site. Little or no vandalism is apparent.

In addition to this exploratory work, underwater video recordings were obtained on the wooden schooner *Nimrod*, the wooden freighter *Majestic*, and the steel-hulled steamer *Merida*. Most of the recording was obtained on selected features of each of these vessels. One noteworthy discovery was made near the schooner *Nimrod*. Here the crew discovered a unique artifact near the bow, possibly made of pine. The artifact was approximately 3.3 metres in length and was carved in the shape of an arrow. It was probably one of two that once adorned the bow sprint. Besides the

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Underwater Survey Licence 87-07

recognizable tip of an arrow at one end, carved markings of feathers, on the opposite end, were still visible, as was some paint.

On all of these known sites, signs of vandalism were apparent. A steel plate on the *Nimrod*, containing five "cats eyes," for example, has disappeared. It had been discovered six months earlier, and was inset on planking behind the windlass. The crew was impressed with the excellent condition and large number of unknown sites, and with the vulnerability of these sites to destruction by vandalism.

ARCHAEOLOGICAL REPORT, ONTARIO 1988

CONSERVATION ACTIVITIES

MINISTRY OF CULTURE AND COMMUNICATIONS: ARCHAEOLOGICAL CONSERVATION ACTIVITIES IN NORTH-CENTRAL ONTARIO

David Arthurs

During the 1988 field season, David Arthurs conducted two rescue archaeology projects in his capacity as regional archaeologist; one on a major fur-trade post, and the other on a Late Archaic site.

FORT WILLIAM FUR-TRADE POST

The North West and Hudson's Bay Company fur-trade post, Fort William (DcJh-8), founded in 1803 and in operation until the purchase of the land by the Canadian Pacific Railway in the mid-1880s, lies on the west bank of the Kaministikwia River near its mouth on Lake Superior, in the City of Thunder Bay. Much of the site lies beneath railway yards and extends into the adjacent residential area. Lakehead University and the Fort William Archaeological Project conducted investigations there during the late 1960s and early 1970s, and subsequent work has been done, in conjunction with construction activities, by archaeologists of the Ministry of Culture and Communications.

Ministry of Culture and Communications, 1825 Arthur Street East, Thunder Bay, Ontario, P7E 5N7

Conservation Licence 88-110

In May 1988, when Arthurs inspected the footing trench for a new railway loading dock, he found that the trench had cut through archaeological deposits, including the walls of at least one historic building (Arthurs nd a). A province-wide strike had put the construction project on hold, and permission was obtained to conduct salvage operations. With volunteer assistance provided by members of the Ontario Archaeological Society and students from Lakehead University Department of Anthropology, virtually the entire construction trench was profiled (some 80 metres in all), and a large pile of the backdirt that had been removed from the trench was screened.

Cultural features recorded included deeply buried wooden drains probably associated with the early nineteenth-century North West Company occupation, stone foundations, and a log crib cellar relating to at least two buildings in the Hudson's Bay Company post administrative complex. There were also pits dating to the railway period and drain features related to municipal activities, probably dating to the late nineteenth and twentieth centuries.

The backdirt from the trench had been dumped elsewhere as landfill. A

dump-truck sized load of earth was passed through 1/4-inch screens and many remarkable artifacts were recovered, including wine glasses, tumblers, pressed-glass comport fragments, ceramics, stoneware and glass bottles, as well as organic materials such as leather shoes, fabric, seeds, and strands of light brown hair. Most were recovered from an extremely "rich" dark organic soil, and it appears that the log crib cellar had seen secondary use as a privy in the latter nineteenth century.

The data from this salvage operation will complement that derived from earlier investigations of the site and present a more complete picture of life at the HBC Fort William in the late nineteenth century.

RENSHAW SITE

During the 1988 field season, Arthurs also conducted controlled surface collections at the Renshaw site (DaJi-1), a late Archaic campsite and copper tool fabrication locale on the northwestern Lake Superior shore, south of the City of Thunder Bay (Arthurs nd b). This rich site has been under investigation by the North Central Region Archaeology Field Office since 1977 and, though heavily disturbed by the extraction of gravel, it has contributed greatly to our understanding of the late stages of the Archaic in the area.

The objectives of the 1988 investigations at the Renshaw site were to continue the intensive surface collection project begun the previous year, to recover artifacts exposed through disturbance and erosion, and to gather data for the interpretation of the activities carried on at the site in prehistoric times.

A roughly rectangular block of thirty-five 5-metre-square units lying along the crest of the ridge and two units near the point were examined. Three of the units had been collected the year before, yet they were still productive of artifacts, attesting both to the continuing disturbance of the site and to its potential for further study.

Each 5-metre unit to be examined was outlined with metric tapes and divided into quadrants for tighter collection control. Artifacts observed on the surface of each quadrant were identified according to raw material and artifact class, plotted on square sheets, and bagged. All but one unit produced artifacts on the surface.

Information from the 1988 operation will augment previous work and will provide, it is hoped, an interesting look at a unique site which, in spite of its seriously disturbed condition, has provided important data on the Late Archaic occupation of the northwestern shore of Lake Superior.

REFERENCES

Arthurs, David. Nd (a). "A Preliminary Report on Salvage Operations at the Fort William Archaeological Site, DcJh-8, 1988." Report in preparation

— Nd (b). "Renshaw Site Archaeological Field Work, 1988." Report in preparation

ARCHAEOLOGICAL INVESTIGATION OF ONTARIO HERITAGE FOUNDATION PROPERTIES

Dena Doroszenko

ELGIN/WINTER GARDEN THEATRE COMPLEX, TORONTO

Dena Doroszenko and John Triggs conducted an emergency salvage excavation at the theatre complex (189 Yonge Street) over the course of several days in April and May 1988. Funding was provided by the Elgin/Winter Garden Unit and the Property Restoration Unit of The Ontario Heritage Foundation (OHF).

During construction of a new basement for the theatre complex, a circular red-brick feature, a well, was encountered. It dates to the late nineteenth century and was built in the backyard of one of the houses that stood on the site before construction of the theatre complex in 1913. The OHF archaeologist undertook the excavation and analysis of artifacts associated with the well. Excavation by Doroszenko and Triggs produced over 500 artifacts. Unfortunately, the well could not be completely excavated because of the high water table, and excavation was halted at a depth of 2.70 metres. The artifacts from the well are indicative of fill deposits dating from the late nineteenth century into the early twentieth century and reveal little information regarding later activities on the site.

GEORGE BROWN HOUSE, TORONTO

Doroszenko undertook monitoring of the construction phase of the George Brown House (50 Baldwin Street at Beverley) restoration project. The project was funded by the Property Restoration Unit of the OHF.

During excavation for new washroom facilities in the basement of the house, a remnant "shell" wall was found along the north foundation wall. This wall is a subsurface structural feature that consists of a brick wall surrounding the stone foundation of the house. It stands 6 to 8 inches away from the house, thereby creating an air buffer. The shell wall was capped so that moisture would run down the wall rather than down the sides of the house. In addition, a remnant red brick pier for an earlier wooden veranda on the north side of the house (a portion of which still stands today) was also documented. No artifacts were uncovered during excavation.

Ontario Heritage Foundation, 77 Bloor Street West, Toronto, Ontario, M7A 2R9

Conservation Licence 88-20

THE NIAGARA APOTHECARY, NIAGARA-ON-THE-LAKE

In conjunction with the exterior restoration plans for this structure, Doroszenko, along with three crew members, undertook salvage excavations in the back yard of the apothecary during the fall of 1988 (19-26 October). Funds were provided by the Property Restoration Unit of the OHF.

During a six-day period, three test units were excavated along the rear of the apothecary. Unit B (3 by 1 metres) uncovered structural foundations, possibly related to the existence of buildings that stood in the middle of the yard during the early to middle nineteenth century. In addition, a refuse pit was encountered containing a large quantity of pharmaceutical glass dating to the early twentieth century. Units C and D (both 2 by 1 metre units) uncovered utility-line disturbance that cuts diagonally across the back yard. A total of 2714 artifacts were retrieved by the OHF and are held by the Property Restoration Unit.

MINISTRY OF CULTURE AND COMMUNICATIONS: SURVEY OF THE BRUCE PENINSULA

William A. Fox

Bill Fox spent nine days between 20 August and 12 November in survey activities to document the settlement patterns of the historic Odawa and their ancestors in the Bruce Peninsula. The purpose of the survey in the Cape Dundas and Cape Croker areas was to discover a major early historic settlement which the distribution of seventeenth-century artifacts and evidence from French maps suggest was situated in the vicinity. Other localities were surveyed to investigate possible Archaic period occupation of the Nipissing and Algoma strandlines, and to determine whether the Lake Algonquin shoreline showed evidence of Paleoindian activities.

Twenty field locations were inspected, resulting in the registration of six new sites and the documentation of six isolated finds. Five of the six registered sites appear to be of Archaic provenance, while the Chegano site (BfHg-2) is a Late Woodland camp. The Late Woodland Balmy Beach site (BdHf-1) was also revisited and ten additional artifacts recovered.

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Conservation Licence 88-90

Although no Lake Algonquin shoreline occupation was identified, a number of small interior sites (ie, West I, Thompson) may reflect millennia of winter-season Archaic hunting activities by a small resident band. During the proglacial low-water stage (Lakes Stanley and Hough), the present peninsula lands would have constituted the upland spine of a much larger landform which extended virtually unbroken northward to what is now Manitoulin Island. No definite evidence of a contemporary Late Paleoindian/Early Archaic occupation has been documented as yet, and many sites are likely under water at present.

The return to the high-water levels during Lake Nipissing times created a considerably different landscape 4000-5000 years ago. While not all Bruce County Nipissing strandline Late Archaic sites are contemporary with this former lake level, the Caudle site artifact collection appears to be consistent with it for the most part. The isolated finds on the Warder property and the Janax site may also be contemporary, although the abundance of chert debitage on the Janax site is more consistent with Terminal Inverhuron Archaic raw material preferences.

Reported chert projectile point discoveries within the village of Stokes Bay may reflect in part a Terminal Archaic occupation along the Lake Algoma strandline. No diagnostics were available for study, unfortunately. Sites such as Barney Ridge (BhHk-6) and those on Willow Creek (BgHj-1-3) to the north and Meier site (BeHh-7) to the south document a substantial Terminal Archaic occupation of the Bruce Peninsula west coast.

To date, little evidence of Early and Middle Woodland occupations has been recorded on the peninsula. So few ceramics were recovered from the Balmy Beach and Chegano sites that their exact Late Woodland provenance is uncertain. No new information was developed regarding the historic Odawa occupation of the area.

Two series of limestone cobble cairns were reported by Howie Frohlich near the north end of the peninsula. The southwestern series covers a clearing and adjacent bush and may comprise close to 100 cairns measuring 1-2 metres in diameter and up to 50 centimetres in height. Their condition suggests some antiquity; but their function remains obscure.

MINISTRY OF TRANSPORTATION: ARCHAEOLOGICAL INVESTIGATIONS IN THE SOUTHWEST REGION

Paul A. Lennox

The Archaeological Unit of the Ministry of Transportation, Southwest Region, directed by regional archaeologist Paul A. Lennox, continued archaeological survey along the proposed Highway 403 corridor, Ancaster to Brantford. The survey resulted in the discovery of thirty-seven archaeological sites, in addition to nine recorded by previous surveys of the right-of-way. Ten of the newly discovered sites were found in mature woodlot and range from small Archaic camps to prehistoric Iroquoian villages.

Test excavation and full-scale mitigation was undertaken on six sites scheduled for highway construction. The Alder site is an historic Neutral Iroquoian camp situated next to a small pond where sherds from a single ceramic vessel, several scrapers, a glass bead, and a small quantity of chipping debitage were discovered. The nearby Haley's Pond site, a small historic Neutral cabin site, revealed two small houses with few interior features. Sherds from approximately thirty-four ceramic vessels and Period IIIa glass beads date the occupation to the 1620-30 period. The Drake site is an 1820s-40s Euro-Canadian farmstead settled by the Loyalist John Drake, commonly known as "Deacon John." The root cellar to Drake's house was excavated, producing a sample of early nineteenth-century domestic refuse. Situated just within the eastern boundary of the Six Nations Reserve, Drake may have leased the land originally from Joseph Brant. The Stratford Knoll site proved to be multicomponent, with Archaic, Middle Woodland, and Neutral occupations. The Ramsey site represents a small Princess Point camp.

The application of new guidelines recommended by consulting archaeologists for systematic screened-shovel testing on uncultivated ground is resulting in the discovery of many more sites; in particular, larger numbers of single-component camps and seasonal occupations. Sites such as Ramsey, Stratford Knoll, and Haley's Pond were missed by previous surveys along the same highway corridor. They are providing new data about the range of site types utilized during various periods and the activities conducted outside major settlements. Work on the

Ministry of Transportation, 55 Centre Street, London, Ontario, N6J 1T4

Consulting Licence 88-84

Highway 403 corridor is expected to continue for several more field seasons.

Archaeological survey was initiated on Highway 7/8 between Kitchener and New Hamburg. Five sites were identified in 1988, four of which — Alder Creek, Hazel, Badenwald, and Kassel — occur in mature woodlot. Day, a late prehistoric Iroquoian component, was the only site found in a ploughed field. Test excavation or complete salvage mitigation of these sites is slated for the 1989 field season.

RECORDING THE JADEL LAKE PETROFORM COMPLEX

Robert Hugh McNally

Robert McNally discovered and recorded a petroform feature (EaKs-1) at Jadel Lake, Ontario, as a direct result of 1987 ethnographic research with Cornelieus McDonald and Chief Roy McDonald of the Islington Reserve (see his report for 1987 in this volume). Jadel Lake straddles the Ontario-Manitoba border at 50° 02' 46" N, 95° 08' 48" W. The approximate location of a possible petroform feature had been provided by Chief McDonald. Site discovery was further assisted by the loan of a Beaver aircraft with the services of pilot Arthur Colfer from Barney Lamm. Other research expenses were financed by McNally.

The petroform feature is approximately 8 metres in length and, at most, 2.5 metres wide. It is situated on a gently sloping area of bedrock, surrounded by heavy lichenation. Exploration of the immediate area surrounding the petroform indicated that several other petroforms might also be present but verification required mapping to determine whether they were human arrangements or natural occurrences. During the first visit, recording was confined to taking measurements and making sketches and oblique photographs. The site was visited on two other occasions to complete the recording and obtain aerial photos of the surrounding area.

The discovery of EaKs-1 and evidence of other petroform features indicated that Jadel Lake was the site of a significant petroform complex. A proper examination of the area would require more time for planning than was available in the fall of 1988. McNally also wanted to obtain the formal approval and cooperation of the community of Whitedog on the Islington Reserve. Jadel Lake is not located on reserve land but is considered a "sacred" area by members of this community. Approval from the community was obtained in the fall of 1988 and plans were made to accomplish a proper survey in the summer of 1989. For results of this work, see McNally's report for 1989 in this volume.

Box 7, Minaki, Ontario, P0X 1J0
Conservation Licence 88-103

POTTERY, PROJECTILE POINTS, AND PICTOGRAPHS: A LOOK AT IGNACE'S PREHISTORY

Dennis Smyk

Dennis Smyk conducted for the second year a study near Ignace in northwestern Ontario, encompassing parts of the watersheds of the Brightsand, English, and Turtle rivers. Once again the survey was conducted with most expenses borne by the licensee. The cost of one aircraft trip to Irene Lake was paid for by the Heritage Branch, Ministry of Culture and Communications, Regional Office, Kenora.

The purpose of the survey was to continue documenting known and reported pictographs, and to conduct surface studies of likely habitation sites, as well as to search for new pictograph locations.

Thirty-five sites were recorded, eight of which were pictographs. The cultural affiliation of the sites encompassed the Laurel, Selkirk, Blackduck, Sandy Lake, unknown prehistoric, and historic periods.

P.O. Box 989, 153 Balsam Street, Ignace, Ontario, P0T 1T0

Avocational Licence 88-38

CONSULTING ACTIVITIES

ALGONQUIN ASSOCIATES: ARCHAEOLOGICAL ACTIVITIES

Ann L. Balmer

In 1988 Algonquin Associates conducted one subdivision and one gas pipeline assessment in south-central Ontario and one gas pipeline assessment in northern Ontario. The subdivision assessment yielded a small historic assemblage on a site (AkGw-23) oriented to a small creek on the property rather than to the road allowance. The artifacts — ceramic, glass, brick, and iron fragments — appear to date from c.1820 to 1860. Further investigation of this site was recommended prior to subdivision development.

No heritage resources were discovered during the course of the pipeline assessment in northern Ontario.

403 Montrose Avenue, Toronto, Ontario, M6G 3H2
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ARCHAEOLOGY DIVISION, REGIONAL MUNICIPALITY OF WATERLOO: RESULTS OF THE 1988 FIELD SEASON

Scarlett E. Janusas

The Archaeology Division of the Regional Municipality of Waterloo under a licence held by Scarlett Janusas and Associates conducted ten archaeological resource assessments in the City of Kitchener, City of Cambridge, City of Waterloo, Township of Wilmot, and Township of Woolwich. In addition, three mitigation projects were conducted in the Township of Wilmot, Township of North Dumfries, and the City of Kitchener. Field crew varied in size from two to twenty individuals under the direction of project manager Scarlett Janusas and/or John Macdonald and/or Dr Shelley Saunders. With the exception of the assessment conducted in Maryhill, Woolwich Township (funded internally by the Region of Waterloo), and the excavation of the Harvie Cemetery (funded internally by the Region of Waterloo and through the generous donation of time and expertise by individuals of McMaster University), all projects were funded by developers.

20 Erb Street West, Waterloo, Ontario, N2J 4G7
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CAMBRIDGE/KITCHENER AREA

The archaeological resource assessment of three properties (Brickers Lots 20 and 21, part of Bechtels Tract/Hidden Valley Road, and the Freeport water storage tank) in Cambridge and Kitchener failed to produce any cultural material. The investigation of Manitou Drive, Kitchener; Westmount Road extension, Waterloo; Philipsburg Patrol Yard, Wilmot Township; the Regional Operations Centre, Waterloo; and the Waterloo North Hydro Transformer Station site, Waterloo, produced findspots. No further mitigation was recommended.

The archaeological resource assessment of 30T-88007, Aberdeen-Doon, in Kitchener was conducted to ascertain the reason for the low frequency of sites in an area identified as exhibiting high archaeological potential. Despite a preliminary survey by another consultant, excellent observation conditions, and 3-metre pedestrian survey intervals, only one additional artifact was discovered. The low frequency of sites in an area of high archaeological potential may be a result of low utilization of the area by Native groups. Low utilization may be a reflection of such factors as vegetation, adequate access to other resource areas,

taboo, religion, and low population density. Further research may assist in identifying social and environmental factors that affected the utilization of specific geographic areas.

WOOLWICH TOWNSHIP

The archaeological resource assessment of 30T-88021, Maryhill, Township of Woolwich, located an historic site (AjHc-3) and recommended that it be further mitigated prior to development.

SHANTZ SITE, WILMOT TOWNSHIP

Archaeological investigation of the side porch midden of the Shantz site (AiHe-33), Wilmot Township, was conducted in conjuction with ongoing renovation activities to the main houses. The material appears to represent a single episode of "spring cleaning" by occupants of the house when construction of the porch foundation provided a readily accessible disposal area. The artifacts range in date from c.1885 to 1929.

SANDROCK SITE, CITY OF KITCHENER

Four field visits were made to the Sandrock site (AiHd-66), City of Kitchener. The first was conducted in an area strip ploughed in 1987, the second followed complete ploughing of the area, the third when observation conditions were optimal, and the fourth prior to monitoring of topsoil stripping. A total of thirty lithic artifacts were recovered from two site loci near the Sandrock Greenway. No diagnostic materials were recovered. Topsoil stripping and shovel shining failed to reveal any subsurface features.

HARVIE PIONEER CEMETERY

The mitigation of the pioneer family Harvie Cemetery in North Dumfries Township was spurred by the owner's plans for development. The Archaeology Division arranged with Dr Shelley Saunders of McMaster University for graduate student Richard Lazenby to undertake the archaeological excavation of the cemetery. The Harvie Cemetery contained fifteen burials. Three of the burials were incomplete: two because of heavy machinery impacting the burials, and the third because of rodent disturbance. Two burials featured semi-oval viewing windows in the coffin that were situated over the head and neck of the deceased. Three gold-leaf medallions with acorns and oak leaves were recovered from one of these coffins.

A few pieces of coffin hardware were recovered from other burials, as were personal artifacts such as buttons and shroud pins. No jewelry was found. Four burials were accompanied by coffin plaques, three of which indicate the individual's name and age at death: David Harvie, aged 71; Mary Fraser Harvie, aged 99; and George Stockwell, aged 71. The writing for the fourth plaque is illegible.

Individuals recovered ranged in age from newborn to ninety-five. Where possible, gender of adults and children was determined during excavation. One burial consisted of two individuals: a woman and a newborn; both presumably died during childbirth. The infant was cradled between the woman's left arm and her chest.

Individual burials also varied in position of the arms and hands. In most cases the arms were lying along the sides

of the torso, but one skeleton had the arms crossing the abdomen. In all burials the skeletons were extended and facing upwards.

All recovered individuals and artifacts associated with the Harvie Cemetery were taken to the McMaster University Anthropology Department where they are undergoing analysis. Reinterment of all the individuals will occur after analysis has been completed.

CONSULTING WORK OF SETTLEMENT SURVEYS LIMITED IN NORTHERN ONTARIO

John Pollock

In 1988 Settlement Surveys Limited made a number of achaeological impact assessments and one salvage excavation. Projects were carried out at or near Lake Abitibi, Lake Superior, Temagami, and Timmins, with up to five field crew working at each site. Although ten projects were undertaken and assessed, only the most interesting ones are described in this report.

LAKE ABITIBI COTTAGE LOT ASSESSMENT

Thirteen block subdivision areas, three commercial development areas, and nine individual cottage lot sites were surveyed in this shoreline assessment and eighteen previously unknown prehistoric and historic archaeological sites were recorded. These discoveries consisted of isolated finds, major and minor buried campsites, and surface scatters. Some sites, such as DdGx-1, DdGx-5, and DfGx-1, are worthy of excavation. Further archaeological work was recommended on subdivision block areas 2, 3, 8, and 21 prior to any development, and for potential commercial areas prior to any detailed development proposals.

TIMMINS AREA COTTAGE LOT ASSESSMENT

An intensive systematic subsurface testing program combined with judgmental subsurface cluster testing of Akweskwa, Pharand, Hillary, and Wolf lakes near the height of land south of Timmins produced thirteen prehistoric sites and one historic archaeological site. These sites consisted of small to large campsites, isolated finds, and a historic logging camp. Since the shoreline areas surveyed consisted only of specific cottage lot locations, the results indicate a high density of prehistoric sites. This concentration of late prehistoric sites on the small interior lakes could lead to some interesting speculation about prehistoric population distribution in northeastern Ontario.

THERESA LAKE RESERVOIR

Located near Marathon on Lake Superior, Theresa Lake serves as the reservoir for the major gold mines at Hemlo. Because of the proposed high-water levels, salvage excavations were undertaken at three sites (DfLk-1, DfLk-3, and DeLk-3), all of which were located during the initial sur-

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vey in 1985. Numerous flakes and pieces of flint, chert, and chalcedony, including one flake of jasper taconite (from the Thunder Bay area), were recovered. Most of these are unworked flakes, although a few stone tools such as hide scrapers and perforators were recovered. The most important artifacts, however, were fragments of two prehistoric decorated pottery vessels relating to the Mackinac Ceramic Tradition. These pieces date the sites on the lake to the AD 1000-1300 period.

ARCHAEOLOGICAL SERVICES INC.: ARCHAEOLOGICAL ASSESSMENTS IN THE PROVINCE OF ONTARIO

Ron Williamson

In 1988 Archaeological Services Inc. (ASI) conducted more than sixty pre-development assessments under the general direction of Dr Ron Williamson. Exploratory investigations or salvage excavation were conducted at fifteen additional sites and archaeological master-plan studies were continued for two municipalities. This research resulted in the registration of 167 new archaeological sites. In addition to ten permanent staff members, twenty-five people were employed seasonally on projects concentrated in the Hamilton, Kitchener-Waterloo, Niagara, and Metropolitan Toronto areas.

SALVAGE EXCAVATION OF THE NORTON SITE

The 1988 field season commenced with the salvage excavation of a portion of the Norton site (AfHh-86), which is located on a level terrace immediately adjacent to the Thames River in west-central London. This late fifteenth-century Iroquoian village, estimated to be 2.8 hectares in size, was first described by W.J. Wintemberg (1939:2), although its exact location was not divulged. The site was rediscovered during a routine pre-development assessment by test-pitting along the proposed route for a London Public Utilities Commission water pipeline. A 170 by 10 metre area was subsequently excavated under the field direction of Martin Cooper to reveal evidence of a single-row palisade, nine adjacent and parallel longhouses, and over 100 features including a semisubterranean sweat lodge, similar to those described by MacDonald (1988). It is believed that the site may represent one of the continuum of communities that culminated in the late fifteen-century occupation of the Lawson site. Excavation and analysis of the site has made an important contribution to our understanding of the culture history of the London region.

SALVAGE EXCAVATION OF THE MYER'S ROAD SITE

Another important mitigation project undertaken was the excavation of the Myer's Road site (AiHb-13), situated on a plateau east of the Grand River in Cambridge, Ontario (MacDonald et al. 1990). Under the field direction of Robert MacDonald and Carol Ramsden, a crew of six investigated this transitional late Early

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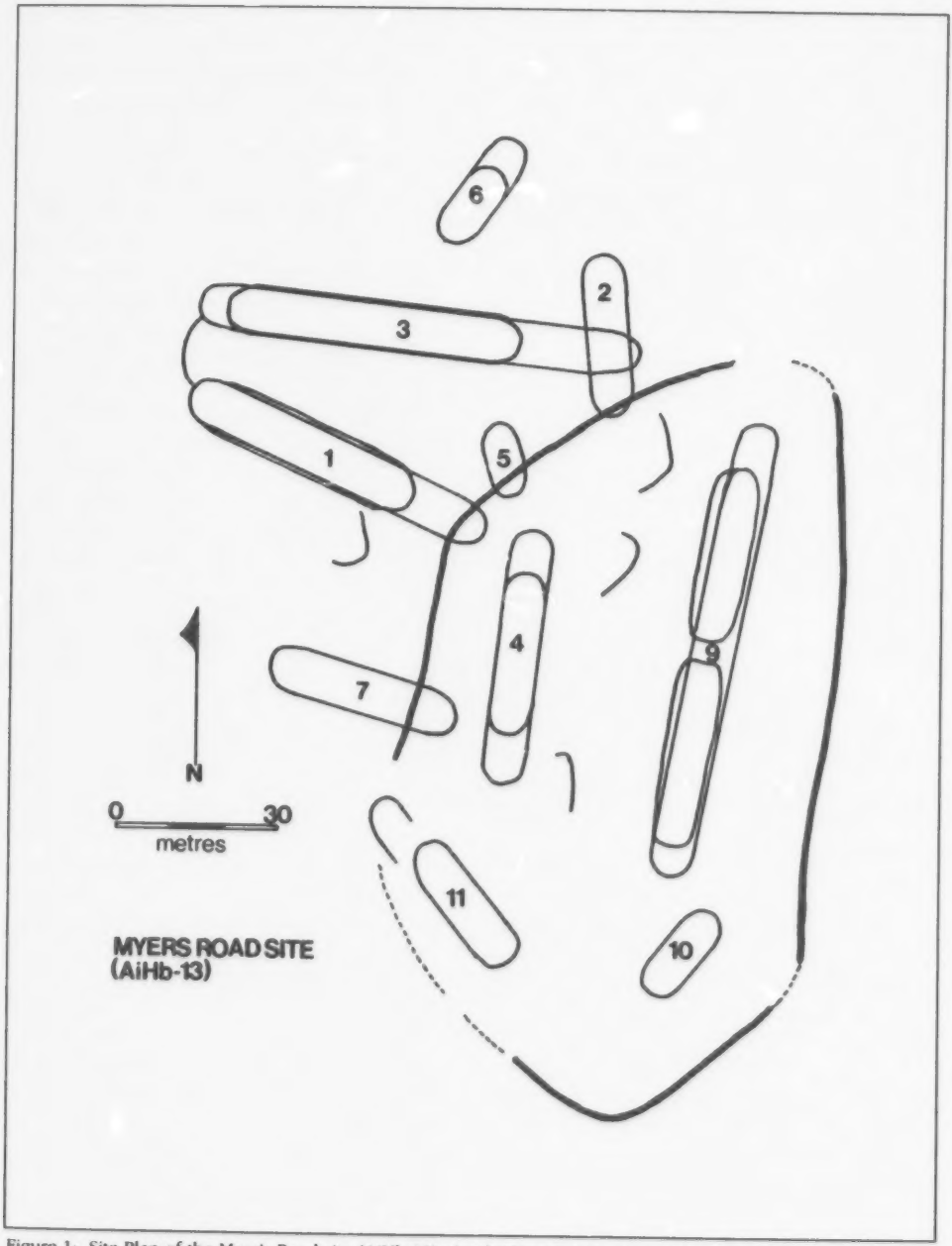

Figure 1: Site Plan of the Myer's Road site (AiHb-13), Cambridge, Ontario. The settlement and ceramic data suggest long-term intermittent occupation of the site.

Iroquoian to early Middle Iroquoian site, which is the first site of this period to have been completely excavated in the Waterloo region. As the site had been ploughed for many years, a controlled surface collection was employed during the initial pre-development assessment conducted in 1987 to define the extent of the site. Excavations conducted from May to September 1988 revealed ten longhouses exhibiting considerable variability in length and relative placement within the community (figure 1). On the basis of ceramic and other data, it is thought that the site may have been occupied on a seasonal basis in the late thirteenth century and then again on a year-round basis in the early to mid fourteenth century. It is clear that detailed analyses and interpretations of the site data will result in an advanced understanding of the cultural evolution of Iroquoian society in the Waterloo region and beyond.

ARCHAEOLOGICAL RESOURCE ASSESSMENT, BRANTFORD

Seventy-two sites and twenty-three findspots were registered by ASI during a routine pre-development field survey of a 150-hectare property in Brantford, Ontario. The survey was accomplished by a crew of eight under the field direction of Carol Ramsden. Sites dating to the Early Archaic through Late Woodland periods were documented, suggesting the area had been used intensively in prehistoric times.

MUNICIPAL MASTER PLANS OF ARCHAEOLOGICAL RESOURCES

Fieldwork and our evaluation of the significance and interpretive potential of the documented archaeological resources within the Town of Richmond Hill were completed, and the report on phases 2 and 3 of the Master Plan of Archaeological Resources was submitted to the Planning Department in November. Twenty-nine new sites were registered, including two Archaic, two Late Woodland, thirteen Euro-Canadian, and twelve sites of unknown cultural affiliation. One of these, the McGaw site (AlGu-88), is a 1-hectare, completely undisturbed late fifteenth-century Iroquoian component located on a headwater tributary of the east Don River. It was discovered by test-pitting in a woodlot during a routine pre-development subdivision assessment directed by Dr Shaun Austin. Because of the pristine condition of the site, a total of fourteen middens, in the form of mounds, was identified by simply removing the duff to expose areas of ash, dark organic soil, fire-cracked rock, and artifacts. Further test excavations were undertaken in the spring of 1989.

Phase 2 fieldwork for the Town of East Gwillimbury Master Plan of Archaeological Resources was initiated under the direction of Martin Cooper. Fifteen new sites were documented, including a number of diffuse lithic scatters along a tributary of the East Holland River. The condition of several previously documented sites was also evaluated. For example, the multicomponent Orpel site (BaGu-3), located along the west bank of the East Holland River, was revisited with Gordon Dibb, who originally registered the site. During the master-plan survey, a scatter of historic material was discovered adjacent to the main concentration of lithic material. Within this latter area, two Archaic projectile points were recovered. Large quantities of calcined bone had also been noted in a discrete cluster on the same property and a burial was removed during quarrying

operations along the river in the 1970s. Future work at the site may help to explain the relationships between these components and other sites in the area.

SALVAGE EXCAVATION OF THE WILCOX LAKE SITE

During the fall of 1988, mitigative excavation was conducted at the Wilcox Lake site (AlGu-17) in Richmond Hill, under the direction of Dr Austin. The site is located on a level terrace adjacent to Lake Wilcox, which is a kettle lake within the Oak Ridges Moraine. Salvage excavation was conducted because a portion of the site was threatened by the construction of two playgrounds. A single, curved longhouse wall and a cluster of interior pit features were documented after the subsoil surface had been hand-trowelled.

Figure 2: A nearly complete reconstructed ceramic vessel from the Wilcox Lake site (AlGu-17), Richmond Hill, Ontario

The recovered ceramic assemblage, which includes a near complete vessel (figure 2), is dominated by collarless rim forms and paddle-marked body sherds, suggesting the site was occupied during the late thirteenth or early fourteenth century. As such, the site is the first of its kind to be identified in York Region, and represents a centrally located community between earlier sites along the north shore of Lake Ontario and later sites in south-central Ontario.

ARCHAEOLOGICAL RESOURCE ASSESSMENT OF THE ORCHID SITE

Skeletal remains and artifacts thought to be associated with the Orchid site (AfGr-2) (White 1966, Granger 1976) in Fort Erie, Ontario, were disturbed during construction activity in the fall of 1988. Dr Williamson and Martin Cooper subsequently visited the site and examined two human adult crania. A brass kettle and a number of trade beads were recovered. The Orchid site, part of which contained an ossuary estimated to hold 300 bodies, was previously examined in 1964 by Dr Marion White of the State University of Buffalo.

ARCHAEOLOGICAL RESOURCE ASSESSMENT OF THE HICKSITE PROPERTY

ASI was also retained by the Local Architectural Conservation Advisory Committee (LACAC) of the Town of Newmarket to conduct an archaeological resource assessment of the remains of a Quaker meeting house and cemetery established c.1829 by the Hicksite sect of the Yonge Street Society of Friends. The objective of the study was to provide the Newmarket LACAC with a site plan, indicating the former locations of the meeting house and gravestones, which could be used as a guide to the preservation and commemoration of the Hicksite property. The location of the meeting house, demolished in 1942, was determined through the examination of sketches of the property and the placement of test units. Similarly, the gravemarkers, which had been removed to the existing western and northern fences during the past decade, were relocated using old photographs. The methodology employed to relocate the gravemarkers represents an innovative and non-destructive approach to the rediscovery of nineteenth-century grave locations (ASI 1988).

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FIELD SCHOOLS

ACTIVITIES OF THE ARCHAEOLOGICAL RESOURCE CENTRE, TORONTO BOARD OF EDUCATION

Karolyn Smardz

During 1988 the Toronto Board of Education's Archaeological Resource Centre continued its excavation of the Ashbridge site (AjGt-1) (see figure 1). The site supervisor was Ellen Blaubergs.

As in 1987, the excavation lasted from mid-May until the end of October. The funding for the project was provided by the Toronto Board of Education with financial assistance from The Ontario Heritage Foundation. School groups attended half-day programs at the site in the spring and fall. During July and August, the site hosted the annual archaeological field schools. Volunteers were encouraged to participate throughout the field season.

In 1987 the excavation was concentrated in the southern portion of the site. In 1988 efforts focused on the northern portion. It was here that the remains of a wooden structure were uncovered. The structure consisted of a number of floorboards laid flat on the ground (figure 2). The nature of the feature represented by the boards is not certain, but has been interpreted as a boardwalk or road leading to the Ashbridge orchard and fields to the north. Stratigraphically, the boardwalk was dated to the late nineteenth century but, since no diagnostic artifacts were connected with it, it could not be dated more closely.

The Resource Centre staff also conducted a small test excavation in the area of the original Ashbridge log cabin. This was built in 1795 and was located at the corner of Woodfield Road and Queen Street East. The excavation consisted of two 1 by 1 metre trenches. The cultural deposit in Test Trench 1 was found to be fairly shallow, with dark stains left by decomposing wood running north-south. The direction of the stains and their location correspond well with the location and orientation of the original Ashbridge log house, although the extent of the test excavation was not large enough to confirm this interpretation. Test Trench 2 was positioned over a deep, filled-in excavation tentatively identified as a cellar. The fill consisted of layers composed of differing materials, including brick fragments, clay, sand, and charcoal.

A few prehistoric sherdlets were also recovered from the test excavation. They

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are identified as dating from the Terminal Woodland period and suggest that the area in which the log cabin remains are located also contains a prehistoric component.

Data from the Ashbridge site contributes to the growing corpus of information concerning the change of east Toronto from a rural to an urban community.

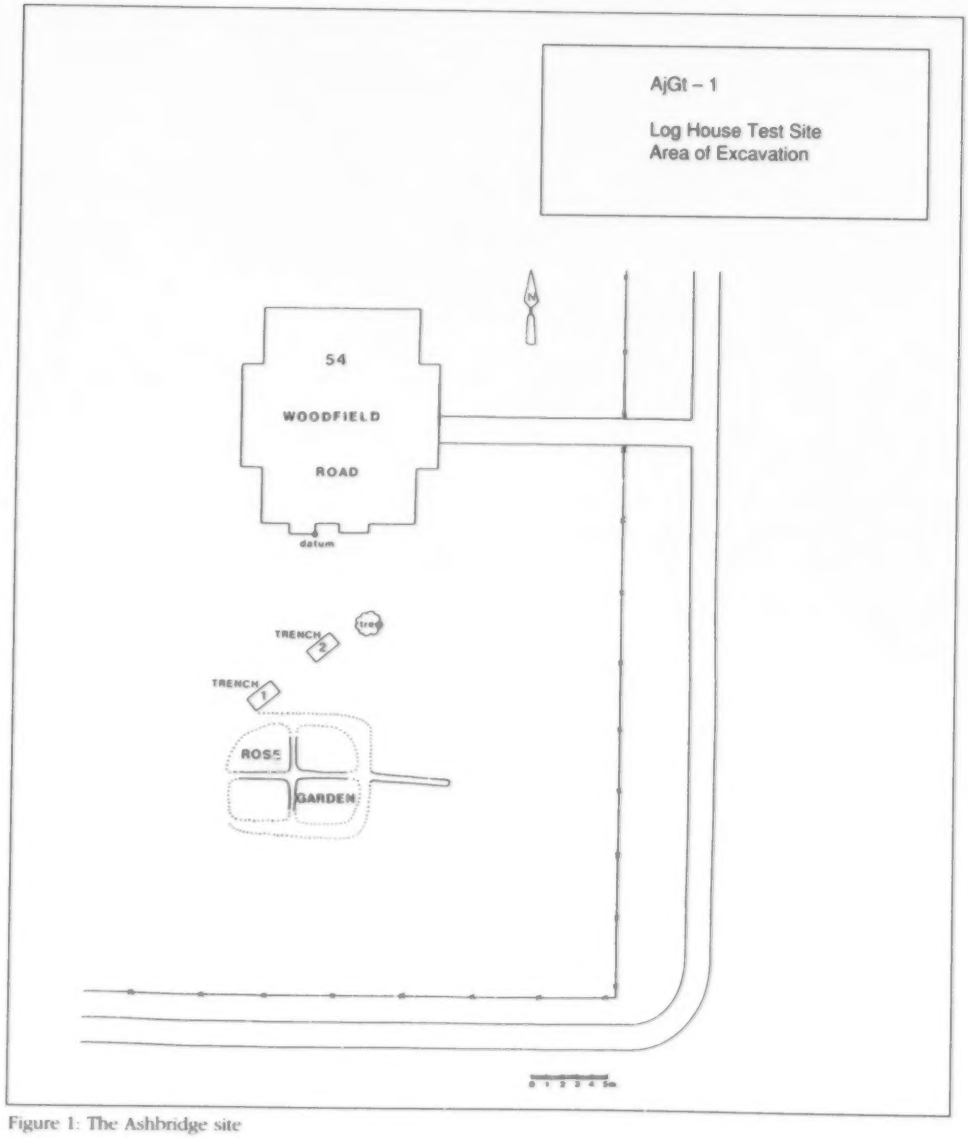

Figure 1: The Ashbridge site

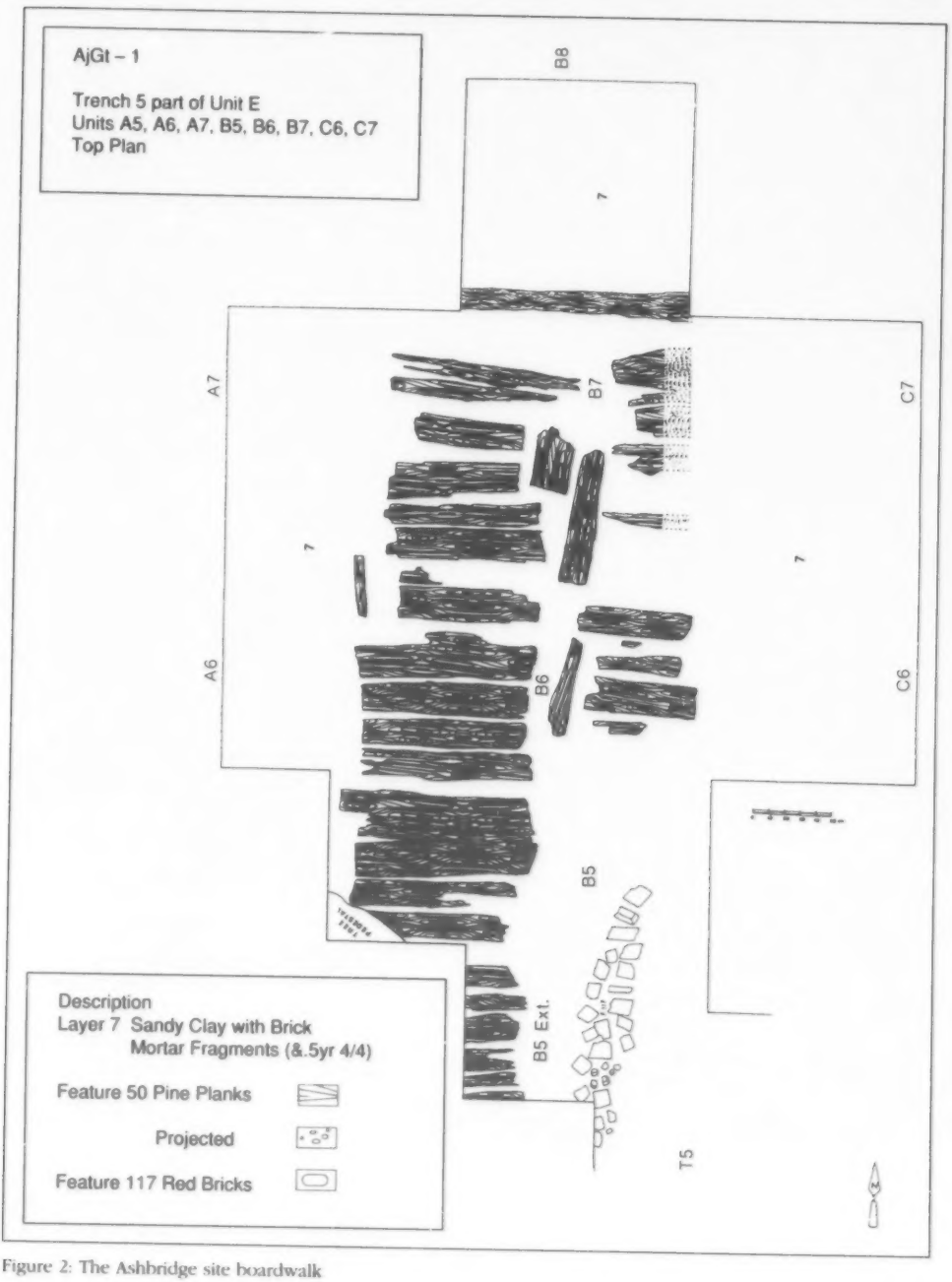

Figure 2: The Ashbridge site boardwalk

SITE/PROJECT SPECIFIC ACTIVITIES

ANALYSIS OF THE THREE PINES SITE, LAKE TEMAGAMI

Diana Lynn Gordon

In 1988 Diana Gordon continued analysis of the Three Pines site (CgHa-6) on Lake Temagami, which was excavated in 1986. The archaeological stratigraphy was analysed using the Harris Matrix method (Harris 1979) in conjunction with artifact and geoarchaeological analyses (Butzer 1982). Gordon examined collections from other excavations in northeastern Ontario and adjacent Quebec, for comparison with material from the Three Pines site. This examination was done at Laurentian University, Sudbury, and at the Archaeological Survey of Canada. Other work included identification of lithic raw materials and local sources (Burbidge 1988) and reconstruction of Lake Temagami vegetation history based on pollen core analyses by J.H. McAndrews of the Royal Ontario Museum (Gordon 1989). This research will form the basis of Gordon's dissertation "A Contextual Approach to the Archaeology of Lake Temagami." Funding was provided by the Ontario Heritage Foundation (ARG-373), with support from a SSHRC doctoral fellowship.

Lithics are often the most numerous artifacts on northern Mixed/Boreal Forest sites. Information on hunter-gatherer cultural behaviour can be gained from examining what types of lithic raw materials were selected for toolmaking, where they were procured, and how they were used. Geof Burbidge (Geology, University of Ottawa), whose doctoral research is on the geology of Lake Temagami, conducted a microscopic examination of lithic tools and pottery temper from the Three Pines site. He identified several rock types with differing properties of fracture and suggested probable sources where they may have been obtained (Burbidge 1988). Three Pines toolmakers exploited a variety of locally available rock such as Gowganda Formation mudrocks; fine-grained sandstone, siltstone, and quartzite from the Lorrain, Gordon Lake, or Bar River Formations; milky white quartz from nearby veins, as well as some wacke, clear quartz, and gneiss. Potters employed granitoid rock, Nipissing diabase, and sand as temper.

Cherts were used for over half of the tools, with the colourful Hudson Bay Lowland (HBL) chert predominant. HBL chert cobbles occur in glacial drift in

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(no licence)

northern Ontario, but none were found during surface examination of beaches over several seasons. Since Lake Temagami is located beyond the "carbonate line" identified by Karrow and Geddes (1987), HBL chert may not have been transported glacially so far south. A poor quality, light gray, fossiliferous chert is found in Lake Temagami drift. These nodules probably originated in the Temiscaming Palaeozoic Outlier and were carried southwest by glacial action (Veillette 1989).

The Three Pines Bog pollen core, analysed by McAndrews, correlates with other northeastern Ontario cores (Liu and Lam 1985; Liu nd) and reflects changing vegetation and climate. The lowest pollen zone in this core, dating between 6400 and 3540 BP, falls within the Hypsithermal interval, when the forest was dominated by white pine. Archaic hunter-gatherers probably enjoyed a warmer, possibly drier climate than later Woodland groups. Between 3500 and 1300 BP, Neoglacial cooling introduced more Boreal Forest species into the Lake Temagami area. Cooling continued from 1300 BP to the present, with white pine gradually decreasing while spruce, fir, and birch increased. Lake Temagami has remained just south of the Mixed/Boreal Forest ecotone up to the present.

Collections from several sites previously excavated by other workers were examined for comparison with the Three Pines site artifacts. Similarities and contrasts were noted in the composition of tool assemblages, reduction technology, raw material selection, and pottery vessel design. At Laurentian University, Gordon examined artifacts, stratigraphic profiles, and field notes from Frank Ridley's excavations of the Frank Bay site (Ridley nd, 1954) on Lake Nipissing as well as Lake Abitibi assemblages from the Abitibi Narrows site and the Ghost River Garden site (Ridley 1956, 1958, 1966). At the Archaeological Survey of Canada, surface collections from various northern Ontario sites were examined briefly, along with larger excavated assemblages from Heron Bay (Wright 1967), Michipicoten (Wright 1969), and, in particular, the Joseph Bérubé site in northwestern Quebec (Marois 1973; Marois and Gauthier 1988). While certain individual artifacts from the Three Pines site are similar in both material and morphology to those from other sites, there are also contrasts between sites in the Lake Abitibi, Lake Temagami, and Lake Nipissing areas. While some differences may be temporal in nature (Pollock 1975, 1984), others may relate to differences in geographic context, local lithic resources, and individual site functions.

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EXCAVATION AND REASSESSMENT OF THE KANT SITE

Barry M. Mitchell

The 1988 Kant site investigations were carried out between April and November by a crew of three, supervised by B.M. Mitchell of Deep River, Ontario. The Kant site is located on the north and east shores of Wilber Lake, Wilberforce Township, Ontario. A roughly equal amount of excavation was conducted at the northern ridge (Kant BjGg-1) and southern part of the site (Duquette BjGg-4), where twelve and eleven 1.5-metre squares were excavated, respectively.

The object of the work was to provide a larger artifact sample from the southerly deposit (Duquette), discovered during the 1987 field season; to continue to search for features on the ridge (Kant); and to attempt to locate evidence of occupations other than the known Point Peninsula and Contact cultures.

At Kant, excavation exposed an ovate stained feature, possibly a roasting pit, measuring about 3 by 1 metres horizontally and extending to approximately 1 metre below the present-day surface. The feature contained forty small fragments of fire-cracked stones. This concentration contrasts with a dearth of fire-cracked stone in the surrounding area. Cultural material in the feature included one rim and a body sherd with pseudo scallop-shell decoration, calcined bone, lithic chipping debris, charcoal, and a possible slate-knife preform (Mitchell 1989).

Artifacts recovered from the two sites include decorated and plain coiled pottery (decoration includes rocker, dentate, or linear stamp and pseudo scallop shell); lithic points and scrapers; a uniface; a bipointed item of unknown use made from copper sheet; and historic items of brass, iron, white clay, and lead. Bone, charcoal, flotation, and mineral samples were also collected.

To date, the Duquette site has produced no deep features, only a flat, refuse-littered cultural floor about 20 centimetres below the present-day surface. Two out-of-context finds appear to be laminated sherds of Algonquin origin. One is plain, and the other exhibits a series of small, shallow, oval, exterior punctates. Emerson's work (1951) indicates that all the previously recovered Iroquoian sherds were from the "point" (BjGh-1) area — the western, north shore

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part of the site. The finished copper artifacts all come from the Kant "ridge" (BjGg-1).

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1988 FORT YORK ARCHAEOLOGY PROJECT

Richard Stromberg

In 1988 the Toronto Historical Board conducted its second year of archaeological excavation at Historic Fort York, the city's most important, minimally disturbed, late eighteenth/early nineteenth-century site (Webb 1989). The aim of the 1988 archaeological season was to test along the route of proposed new storm drains and water lines in areas where potential archaeological resources might exist. Seven areas (126.5 metres^2) were targeted for investigation. These areas were deemed to be of prime importance for determining the position of pre-1813 structures for which there was very little information. The project was directed by Dr Donald A. Brown and Catherine Webb with a staff of twelve archaeologists. Funding for the project was provided by the City of Toronto.

A total of 23,440 artifacts was recovered during the 1988 excavation. All of these artifacts were catalogued by computer using DBase III+.

The first area excavated consisted of five units immediately west of the wall in the dry ditch outside the west gate. Although the area has undergone extensive alteration during the 1930s' restoration of the fort, many of the lower cultural strata were still intact. These layers consisted of 50-60 centimetres of superimposed midden layers lying directly over subsoil. The artifacts found within the various midden layers indicated that kitchen refuse had been dumped over the wall for a long period of time beginning in the late half of the eighteenth century and continuing well into the last half of the nineteenth century.

The second excavated area consisted of seven units located east of the North Brick Barracks and north of the central pathway. A total of 80-100 centimetre buildup of cultural layers was found over subsoil in this area. Excavation here showed the existence of a mid to late nineteenth-century wooden walkway and a late nineteenth-century road surface. An early to mid nineteenth-century refuse pit was also located within the excavation area.

The third and fourth areas to be excavated both contained late eighteenth- to early nineteenth-century building remains. These areas were located at the eastern end and central portion of the fort, res-

Toronto Historical Board, Marine Museum, Exhibition Place, Toronto, Ontario, M6K 3C3

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pectively. At the eastern end of the fort the evidence consisted primarily of a burned hearth area, whereas in the central area of the fort the northeast corner of a stone foundation was found. A stone box drain c.1860 was also found immediately east of the earlier stone foundation. This drain was virtually identical to one found during the 1987 excavation of the basement of the officers' quarters and contained a large quantity of late nineteenth-century ceramics.

The fifth, sixth, and seventh areas excavated were located at the eastern end of the fort and in all cases near to the present road through the fort. Although the lowest strata were similar to those found elsewhere in the fort, the upper levels consisted of superimposed layers of brick rubble which had been used for road surfaces in the late nineteenth century. The seventh area excavated just inside the east gate also revealed a well-preserved mid nineteenth-century log-surface road. Drawings and paintings of the fort during this period reveal that the original east gate sloped up from a creek bed, and thus the log-surface road may have provided better traction for wagons or carts being driven up the clay slope.

In conclusion, this second year of excavation at Historic Fort York continued to verify the presence of strata and artifacts dating from the initial occupation of the site in 1793 through to the twentieth century.

Finally, as a lasting reminder of the role archaeology can play in contributing to our knowledge of the history of the site, a permanent archaeology gallery was opened to the public in 1988. This display not only presents the methods and rationale of archaeology but also shows a representative sample of the growing collection of archaeological artifacts and data from the fort.

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ARCHAEOLOGICAL REPORT, ONTARIO 1989

CONSERVATION ACTIVITIES

MINISTRY OF CULTURE AND COMMUNICATIONS: ARCHAEOLOGICAL CONSERVATION ACTIVITIES IN NORTH-CENTRAL ONTARIO

David Arthurs

THE BELANGER-STAKIW SITE

Owing to the reorganization of the Ministry of Culture and Communications archaeological unit, David Arthurs was able to conduct only one brief field investigation during the 1989 field season. With volunteer assistant Janet Morrison, a project was undertaken on 6 August 1989 to map accurately an unusual rock structure site located on a small island in Lake Superior's Nipigon Bay archipelago, near Rossport, Ontario. Site DeLu-5 had been reported by crew members M. Belanger and S. Stakiw during Arthurs's archaeological survey in 1982, and preliminary transit mapping had been done during a second visit in 1983.

The island is a popular recreation spot and, during the 1983 mapping, several cairns were found to have been disturbed in the brief time since the 1982 inspection. The objectives of the 1989 investigations were to collect additional data on the site and to monitor the impact of recreational use of the island over the intervening six years.

Ministry of Culture and Communications, 1825 Arthur Street East, Thunder Bay, Ontario, P7E 5N7

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The site occupies a broad series of elevated cobble ridges overlooking a small bay at the southwest end of the island. The terraces, composed of large shingle-like cobbles heavily encrusted with lichen, rise sharply from the present waterline, then slope gradually inland, to lie against a low bedrock ridge behind the site. Spruce forest associations border the site, which looks out over small bedrock islands to the open lake.

During the 1989 fieldwork, each cairn was sighted in from a datum installed south of the rectangular walled structure, bearing and elevation readings were taken, and size and condition were noted. Spot elevations were taken at several points along the terraces and at the shore. Several cairns were cross-referenced from secondary datum points with transit and tapes as well.

The main structure is a large rectangular walled pit, 3.4 by 2.35 metres in size and 0.5 metres deep, erected on the crest of the cobble beach farthest from the shore. The interior of this feature, though covered in leaf mould from the heavy vegetation directly behind it, may have been disturbed at some time in the past. Stretching out for over 100 metres along the crests of the cobble ridges in either

direction are some fifty-seven low rock cairns, each approximately 0.75 metres in height and less than 1 metre in diameter.

Interpretation of the rock cairns must await the completion of the transit map and integration of data collected in 1982, 1983, and 1989; however, it is clear that the Belanger-Stakiw site, with its many curving lines of cairns, is unique among cobble architecture sites thus far reported for the north shore of Lake Superior. It is to be hoped that the increasing recreational and developmental pressure on the Lake Superior islands will not have a detrimental effect on this unusual site.

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ARCHAEOLOGICAL MASTER PLAN FOR THE METROPOLITAN TORONTO AND REGION CONSERVATION AUTHORITY

Robert W.C. Burgar

The objective of the Archaeological Master Plan is to describe a program for the identification, study, conservation, and interpretation of heritage resources occurring on lands owned by the Metropolitan Toronto and Region Conservation Authority (MTRCA). By incorporating a consideration for heritage resources in land-use planning, the master plan study provides MTRCA with a strategy for meeting the requirements of the Environmental Assessment Act, the Planning Act, and the Heritage Act.

The Archaeological Master Plan study consists of four components: (1) an inventory of previously recorded archaeological sites on MTRCA lands; (2) the results of a field survey of selected properties owned by MTRCA; (3) the development of a model defining potential archaeological site locations; and (4) an assessment of the need for an archaeological interpretive facility managed by MTRCA to curate heritage material and promote MTRCA's archaeological program to the general public.

Metropolitan Toronto and Region Conservation Authority, 5 Shoreham Drive, Downsview, Ontario, M3N 1S4

Conservation Licence 87-70, 88-09, and 89-125C1

DETAILS OF WORK COMPLETED

Archaeological Heritage Inventory

An inventory of previously recorded archaeological sites on file with the Heritage Branch of the Ontario Ministry of Culture and Communications, combined with a field survey of 415 hectares of MTRCA property, has identified sixty-nine archaeological sites on land now under MTRCA ownership (twenty-nine recorded and forty newly discovered). In addition, numerous isolated finds were located. These isolated artifacts and archaeological sites represent 12,000 years of human occupation and document settlement patterns similar to those in other regions in southern Ontario but with some distinctive characteristics. Nineteen of the forty new sites are directly associated with related kettle depressions (lake, pond, marsh) as the source of nearest water. At this time, the relationship between these archaeological sites and the kettle depressions is unclear. Recent test excavations at the Esox (AlGu-99) and Westlake (AlGw-32) sites were conducted to aid in the understanding of this geographic relationship. These excavations indicate a short-term use of the site areas by Paleo-

indian and/or Middle Woodland groups for extraction/processing activities.

Archaeological Site Predictive Model

During the course of the master plan study, an Archaeological Site Predictive Model was developed for use by MTRCA. Statistical analyses of a well-established data base and mathematically derived variables were used to construct a model defining geographic areas of high, medium, and low potential for containing archaeological sites.

In addition to providing an inventory of archaeological resources on MTRCA lands and a predictive model for ranking property according to its potential for containing archaeological sites, the Archaeological Master Plan is significant in a number of other important ways:

- It proposes an Archaeological Heritage Strategy for the management of archaeological heritage resources on MTRCA property as an integrated component of the Greenspace Plan for the Greater Toronto Region. Because of continual pressure of urban growth in the Metropolitan Toronto Region and the need to focus government attention on the necessity for a watershed approach to resource management, MTRCA developed strategies by which its vision for the future greenspace of the greater Metro region could be achieved. The Greenspace Plan was adopted by MTRCA in October 1988.
- It comments on the feasibility of developing an archaeological facility and public program at the Kortright Centre for Conservation.
- It provides a plan for the archaeological assessment and, if necessary, mitigation of heritage resources in advance of land-use changes.
- It proposes the establishment of an annual archaeological field school, operated jointly by MTRCA and York University, to fulfil, in part, MTRCA's mandate for conservation authority.
- It argues that because MTRCA owns and manages public lands, MTRCA must take direct responsibility for the conservation of heritage resources on those properties. It also recommends the adoption of the Archaeological Master Plan study for that purpose.

RESULTS

In July 1990 the Metropolitan Toronto and Region Conservation Authority adopted the Archaeological Master Plan study. MTRCA authorized the immediate implementation of several proposals in the study, including a strategy of assessing proposed development of MTRCA property and the continuation of the joint MTRCA-York University Archaeological Field School. In addition, a staff committee has been established to explore further the proposal for an archaeological interpretive facility at the Kortright Centre. Other proposals in the master plan will also be considered in the near future as resources become available.

CONSERVATION AND SURVEY IN RENFREW COUNTY

David J.A. Croft

In 1989 three areas were examined in the vicinity of Lake Doré where it was thought construction of public roads might expose cultural features or artifacts near possible portage routes. No cultural remains were found in these road excavations. Funding was by the licensee.

Study of land forms and the locations of isolated artifacts found by residents along small streams connected to Lake Doré and Muskrat Lake suggest other areas which could be surveyed.

In 1989 the licensee responded to requests from the Champlain Trail Museum, Pembroke, for identification of artifacts found in the area. Several of these artifacts have since been donated to the museum.

Continued communication with landowners who have large sites on their properties serves to monitor the condition of the sites and to indicate that, to date, no damage other than normal ranching activities has occurred.

1127 Boundary Road, Pembroke, Ontario, K8A 7T9
Conservation and Survey Licence 89-117A

ARCHAEOLOGICAL INVESTIGATION OF ONTARIO HERITAGE FOUNDATION PROPERTIES

Dena Doroszenko

GEORGE BROWN HOUSE, TORONTO

In 1989 this property continued to be monitored during the course of restoration work. The monitoring was undertaken by Dena Doroszenko, archaeology coordinator, Property Restoration Unit.

When the restoration contractor excavated the trenches around the foundations of the house to replace weeping tiles and parge the foundations of the house, he uncovered a remnant "shell" wall and drain boxes of window wells along the east side of the building. Doroszenko documented this feature but she recovered only one complete artifact — a glass soda water bottle, dating to 1867-76.

CHEDOKE ESTATE, HAMILTON

Doroszenko undertook monitoring of the construction work around the foundations of the carriage shed on the estate. A small number of historic artifacts were retrieved, dating to the late nineteenth century.

BARNUM HOUSE, GRAFTON

During exterior restoration of the Barnum House in the fall of 1989, Doroszenko and Alicia Hawkins undertook monitoring of the construction of trenches along the south, west, and northwest foundations of the building. Funds were provided by the Property Restoration Unit of the OHF.

Archaeological excavations conducted by Gary Warrick in 1982 and 1986 uncovered evidence for an earlier structure (c.1814) that had burned down. During monitoring work in 1989, additional evidence of this structure was noted along the southern exposure of the house. This consisted of a significant deposit of demolition debris (plaster fragments and charcoal) and artifacts such as fire-hardened wrought nails and melted window glass. A small quantity of ceramics dating to the 1820s-1830s was also recovered near the northwestern corner of the west-wing addition.

Ontario Heritage Foundation, 77 Bloor Street West, Toronto, Ontario, M7A 2R9

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ARCHAEOLOGICAL INVESTIGATION IN THE PETUN AREA

Charles Garrad

During the 1989 season, Charles Garrad and a varying number of volunteer members of the Petun Studies Group continued observing and monitoring known archaeological sites within the Petun archaeological zone. Various other activities were pursued for the purpose of raising local awareness of these heritage resources. Four registered archaeological sites were either visited or observed from the nearby public road.

The group visited the Peacock site (BcHa-5) at the request of new owners who intend to develop it as part of a golf and country club. They opened a test square to rediscover the location of excavations in 1966. This work demonstrated the presence of Native material to the new owners and was instrumental in persuading them to hire an archaeological consultant to assess and delineate the site. Subsequent work on the site by Charles Garrad and self-funded volunteer members of the Petun Studies Group was conducted under the direction of Dr Heather McKillop of Northeastern Archaeological Associates for the purpose of delineating and preserving the site. The artifact sample obtained, considered in conjunction with existing material from the site, indicates that the site was probably not the Jesuit "St Thomas" as had been earlier proposed. The report of this work will be submitted by Northeastern Archaeological Associates.

The Glebe Site (BcHb-1) has been subdivided and a gravelled lane built across it. Unfortunately, there are no controls to prevent severance from a known archaeological site, nor is there a reporting/response system able to undertake mitigation.

Garrad also visited the Plater-Martin site (BdHb-1) to assist a crew from Archaeological Services Inc. who were conducting an assessment under the direction of Dr Ronald Williamson. The report of this work will be submitted by Archaeological Services Inc.

The Plater-Fleming site (BdHb-2) was observed from the road. Until it was ploughed in 1988, this site was possibly the last major Iroquoian site in Ontario with the original surface substantially undisturbed.

Other voluntary work during the year in the research area included the opening of a museum gallery exhibit ("The

103 Anndale Drive,Willowdale, Ontario, M2N 2X3

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Times of the Petun," Collingwood Museum, 1 July), participation as speaker at the unveiling of an historic plaque ("The MARY WARD," Craigleith Provincial Park, 23 July), and one public talk ("EKARENNIONDI — Indian Myth and Magic in the Blue Mountains," Collingwood Museum, 21 September).

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MINISTRY OF TRANSPORTATION: ARCHAEOLOGICAL INVESTIGATIONS IN THE SOUTHWEST REGION

Paul A. Lennox

The Archaeological Unit of the Ontario Ministry of Transportation, Southwest Region, directed by regional archaeologist Paul A. Lennox, undertook a survey along the proposed realignment of Highway 26, Wasaga Beach to Collingwood. The route follows the post-glacial Lake Nipissing shoreline southwest of Nottawasaga Bay. Two Late Woodland sites and an aceramic component were identified. Necessary salvage excavations will be conducted on the Collingwood site before construction is scheduled to begin. In conjunction with the archaeological component of this project, methods are also being examined to identify buried paleontological deposits associated with Nipissing beach.

Archaeological survey continued in the Highway 403 corridor, with re-examination and controlled surface collection of sites identified in 1988. A scatter of activity areas collectively known as the Bruce site were thought to be associated with a nearby historic Neutral village but were found to represent chipping stations and isolated pottery vessels from a number of temporal periods.

Three sites were mitigated in 1989 in the Highway 7/8 corridor between Kitchener and New Hamburg: Alder Creek, Kassel, and Day. The Alder Creek site proved to be an early Late Woodland component, possibly a winter base camp. Hearths and domestic refuse were recorded, but unfortunately no structure could be delineated. The Kassel site is an Early Archaic bifurcate-base occupation dating between 9000 and 8000 BP. The Day site represents a late prehistoric Iroquoian camp. During the course of excavation, a single large pit feature was found containing several vessels and numerous maize fragments. The Day site is just one example of the poorly known fifteenth- and sixteenth-century Iroquoian occupations in the Kitchener area.

Survey continued in the Highway 7/8 corridor east of New Hamburg and resulted in the discovery of several additional sites in the Hofstetter Lake area. A multicomponent Archaic site, a Middle Woodland component, and an undisturbed late prehistoric Iroquoian village were found to be partially within the construction zone. Survey and excavation are to continue on these projects in the upcoming field season.

Ministry of Transportation, 55 Centre Street, London, Ontario, N6J 1T4

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Survey and salvage in the London area concentrated on a small Middle Woodland component to be impacted by a bridge detour on Dingman Creek. Sherds from several ceramic vessels and two shallow pit features from the Dingman Creek site contribute to our knowledge of the little known late Middle Woodland stage.

Survey associated with interchange improvements to Highway 126 in the Pond Mills area east of London identified three sites. Mitigation of the late prehistoric Iroquoian Bradley Avenue site has uncovered pit features and domestic refuse likely associated with activities surrounding the many ponds and marshes nearby. Test excavations on the Pondview sites have also identified Archaic and Middle Woodland occupations.

Ministry of Transportation highlights from other regions in Ontario include Andrew Hinshelwood's survey on the new alignment of the TransCanada highway west of Thunder Bay, where a second "Cummins" site has been identified. Central Region has announced the appointment of Gary Warrick as regional archaeologist. That position, previously held by Mary Ambrose, had been vacant for several years. In the interim, Central Region's archaeology was undertaken out of the Southwest Regional Office.

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REMOTE SENSING AT THE JADEL LAKE PETROFORM COMPLEX

Robert Hugh McNally

McNally directed a three-week exploration and recording project at Jadel Lake, located on the Ontario-Manitoba border. The field crew consisted of an assistant field supervisor and three Native people from the Islington Reserve, a short distance from the site. The project was funded by a grant from The Ontario Heritage Foundation.

The complex was located by McNally in the fall of 1988 during the course of confirming ethnographic information from informants at the Islington Reserve. The discovery and recording of one petroform feature, EaKs-1, was accomplished on the initial trip. Observations on nearby boulder configurations indicated the possibility of at least six additional petroform features. In the summer of 1989 a systematic survey was conducted along the northwest shore of the lake extending inland up to 1000 metres. Limited land and aerial survey was also conducted along the southeast shore. The project had a dual purpose: to discover and record petroform features, using an experimental photogrametric remote sensing process.

The project succeeded in discovering and recording seventeen petroform features (including EaKs-1) as well as eight other possible human activity sites, including wild rice milling depressions in the bedrock. The majority of all discoveries occur in Ontario in an area measuring 1000 metres by 500 metres. One possible site activity site is situated in Manitoba approximately 700 metres west of the Ontario sites, and a lone petroform feature occurs on the west shore of Jadel Creek, approximately 2800 metres east of the majority of the Ontario sites. Petroform feature configurations include a possible medicine rattle, serpents, circles, and numerous abstract geometric designs ranging from simple outlines to filled-in features. Sizes range from as little as 1 metre in diameter to 14 metres in length. The identification of the petroforms can only be postulated by reference to familiar shapes. The identity of the people(s) who made the petroforms is not known.

While EaKs-1 was the first recorded petroform in Ontario, in March 1989 there were 177 recorded boulder arrangements in Manitoba. Of these, ninety-eight were identified as petroforms association with non-secular use, two were identified as

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thunderbird nests, and seventy-seven were identified as tipi rings.

The majority of the petroforms have been mapped by using the "reticule method" devised by Dr L.A. Bayrock of the Alberta Research Council (Buchner 1983:10). The remote sensing process used to map the features at Jadel Lake is similar to aerial mapping techniques. A Photogrametric Grid Apparatus (PGA) prototype was used to obtain photos of the petroform. These photos provide a three-dimensional image when they are arranged in a mosaic and viewed under a stereomicroscope.

At the present time, accurate recording of petroforms is of primary concern. This will serve to document a previously inadequately recorded type of archaeological site and to provide a basis for interpreting the identity of petroforms as well as their cultural origin and age.

REFERENCE

Buchner, Anthony P. 1983. *Papers in Manitoba Archaeology: Miscellaneous Paper No. 14*. Department of Cultural Affairs and Historical Resources, Manitoba

POTTERY, PROJECTILE POINTS, AND PICTOGRAPHS: A LOOK AT IGNACE'S PREHISTORY

Dennis Smyk

Smyk conducted his third season of study near Ignace in northwestern Ontario, encompassing parts of the watersheds of the Brightsand, English, and Turtle rivers. This year's survey was funded by a grant from The Ontario Heritage Foundation.

The purpose of the survey continued to be the documentation of known and reported pictographs, and again Smyk made surface studies of likely habitation sites. A major part of the 1989 survey took place within the new Turtle River Waterway Park. An archaeological survey had been conducted in this area by Settlement Surveys Limited in the fall of 1986. The contractor reported that constraints did not allow for a thorough survey at that time.

In 1989, a total of eighty-three sites were documented during the field season in the study area, fifty-six of which were within Turtle River Waterway Park. Pictographs were found at twenty-six sites. Cultural affiliation of occupation sites encompassed the Laurel, Blackduck, Selkirk, and historic periods.

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CONSULTING ACTIVITIES

AN ARCHAEOLOGICAL STUDY OF DISTURBED HUMAN GRAVES AT FORT FRONTENAC, KINGSTON

Nicholas R. Adams

Nicholas R. Adams of Heritage Consultants, in conjunction with Mayer, Poulton and Associates, directed a three-week salvage excavation project of some disturbed French-period burials within Fort Frontenac, Canadian Forces Base, Kingston. The work was done under contract to the Department of National Defence. Gary Brewer, Kasey Brown, and Karin Helmstaedt worked as full-time field crew and Linda Gibbs as field osteologist. Osteological analysis of the human skeletal material was undertaken at McMaster University by Carol DeVito under the direction of Dr Shelley Saunders. Rosemary Prevec conducted the analysis of faunal remains from the site and Rodolphe Fecteau analysed wood samples from the coffins.

The site was discovered in 1987 during excavation of a steam-pipe trench between two of the buildings within the Fort Frontenac complex and brought to the attention of staff of the Cataraqui Archaeological Research Foundation. The digging of the steam trench had resulted in the disturbance of an undetermined number of burials, fragments of which were clearly visible protruding from the trench walls. Staff of the foundation gained permission from the Department of National Defence to clean and record the trench profiles and to undertake a preliminary analysis of the fragments of human skeleton retrieved from the bottom of the trench. At that time, a series of archaeological excavation units was also laid out adjacent to the trench to coincide with those areas where the greatest concentrations of human skeletal material had been identified. The surface deposits of the units were removed and recorded, but the work was forced to stop in October 1987 when the contract between the Cataraqui Foundation and the Department of National Defence expired. The excavation units were sealed with plastic tarpaulins and backfilled with clean sand. The area was then resodded and the flower gardens replanted.

Prior to the 1989 excavations it had been assumed that the cemetery dated to the early French period. Over the winter of 1688/9 a large number of the garrison of the fort died of scurvy, leading to the

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early hypothesis that the burials were those of French servicemen.

In 1989, under contract to the Department of National Defence, Adams Heritage Consultants and Mayer, Poulton and Associates undertook to investigate and remove the burials which had been disturbed by the 1987 construction trench and to provide an assessment of the age and archaeological significance of the interments. The excavation units begun by the Cataraqui Archaeological Research Foundation were relocated and completed, and two small additional units were excavated to intercept additional concentrations of human bone which had been identified in the trench wall. The remains of eleven burials dating to the late French period (1730-58) were recorded *in situ*. In addition, the remains of an undetermined number of individuals that had been disturbed during the placement of subsequent burials was also recorded. Ten of the intact burials were contained within simple 'six-plank' pine coffins that were held together with iron nails. Of these, seven contained the remains of individuals estimated to have died between the ages of sixteen and twenty-five and one contained the remains of a slightly older man, who may have reached his mid-forties. Two of the interments contained within coffins were those of infants. Analysis of the skeletal biology of the burials suggests that both Native and non-Native people were interred in the cemetery.

Few artifacts had been deliberately included with the burials. Burial 1B15 contained a slightly modified, water-rolled "whetstone" and a single annular copper alloy brooch. Copper alloy brooches, identical in size and form, were also found with burial 1B17.

One burial (1B24) was distinctly different from the majority. It consisted of the remains of a child of approximately six years of age, who, at the time of burial, had been cloaked in a vermillion-coated leather hooded jacket and accompanied by an iron knife and a necklace of y-shaped shell and tubular glass beads.

The 1989 excavations revealed that while the cemetery did indeed relate to the French period of occupation of the fort, it dated to the later rather than the earlier phase of occupation. An analysis of the artifacts from the burials, the grave shafts, and the overlying deposits and an examination of the historical data relating to land uses in this area of the fort strongly suggest that the interments occurred during the period between 1730 and 1758.

Prior to 1695 the Recollet mission which served the settlement was located away from the fort, along the Lake Ontario shore. Presumably the burial ground used during this period was located close to the mission rather than adjacent to the fort. After 1695 the Recollet mission was moved inside the fort walls. While a cemetery was no doubt established nearby at that time, it is unlikely that the burials reported here were part of that early cemetery. On eighteenth-century plans of the fort, an Iroquois village is indicated occupying the area between the fort and the lake shore, and no cemetery is shown in the area. During the 1720s the gradual decline of the Iroquois village made this land available for alternative uses. The burials are thus interpreted as part of a cemetery established by Recollet missionaries on the site of the former Iroquois village to serve the whole Fort Frontenac community. The cemetery was used during the last decades of the

French period. This interpretation is further corroborated by the similarity between the ages at death and the ethnicity of the people buried within the cemetery (as determined by skeletal analysis) and those reported in the parish records for this period.

The site is now protected and will be marked with a commemorative plaque.

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ALGONQUIN ASSOCIATES: 1989 ACTIVITIES

Ann L. Balmer

Algonquin Associates conducted six subdivision and gas pipeline assessments in south-central and southwestern Ontario. One subdivision project was a mitigation excavation of a small mid nineteenth-century farmstead (AkGw-23) in the Brampton area. This excavation produced one feature with a small assemblage of ceramic, glass, brick, bone, and iron remains. Other recoveries included an 1816 coin, a fabric-covered button, straight pins, cutlery, and a glass bead.

PIPELINE CORRIDOR EVALUATION

In one gas pipeline assessment an evaluation was made of heritage resource potential but did not involve fieldwork. The study covered a large area in southwestern Ontario and, in keeping with the requirements of the Environmental Assessment Act, it evaluated the potential impact of pipeline installation on heritage resources.

The procedure for estimating and evaluating the impact of a development on heritage resources within a large study area at a general scale requires a systematic approach to assessing the potential for both prehistoric and historic archaeological resources. It was necessary to generalize from site-specific information to a general assessment of potential for each corridor. Five alternative corridors were evaluated and compared. The corridors were then ranked according to their potential impact on heritage resources, the corridor with the lowest impact receiving the highest rank.

Available data were collected at a scale of 1:50,000, which is considered appropriate for comparing the corridors on a general level. The data were then mapped at a scale of 1:250,000, the presentation scale required by the pipeline company. A corridor width of 1500 metres (750 metres on each side of the centre line) was used for recording all data. Criteria for assessing heritage potential were selected for their appropriateness considering the scale of the study. Since the alternative pipeline corridors had been routed to avoid all built features, the assessment of heritage potential was limited to archaeological (subsurface) resources. Two categories of archaeological resources were considered: prehistoric and historic.

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Prehistoric Resource Potential

Three criteria were used for identifying zones of high potential for prehistoric archaeological resources.

(1) Proximity to water: Recent research on the location of prehistoric sites in southwestern Ontario suggests that most sites are found within 250 metres of some type of water, either present-day or former water bodies/drainage systems, mapped on a scale of 1:50,000 (Mayer, Pihl and Poulton 1985: 68, 71). The data on this variable were obtained by counting all visible water crossings or bodies of water within each corridor at a scale of 1:50,000.

(2) Sand plains and glacial spillway features: The second variable for which there is a fairly high degree of correlation with prehistoric site locations is physiographic unit, with the preference generally being for areas of well-drained soils such as sand plains. Glacial spillway features also show a high potential for archaeological sites. This potential is greatly increased when these features are present in combination (eg, a water source in a sand plain). Data on these variables were obtained from Chapman and Putnam's (1973) map of the physiographic units of southern Ontario.

(3) Previously recorded site locations: Known prehistoric sites indicate the presence of prehistoric activity in an area and the possibility that additional sites may exist. This is particularly true of large village sites which may be surrounded by a series of special purpose sites and seasonally occupied hamlets. Consequently, the area within 2 kilometres of a village has high potential for additional archaeological remains. Areas of concentration of sites were also mapped. A list of registered sites was obtained from the Heritage Branch of the Ministry of Culture and Communications (MCC).

Historic Resource Potential

Two types of historic resources are generally considered to be significant in most environmental assessments: (1) sites that are particularly early in the settlement of an area; and (2) sites that are associated with major developments and activities of growing communities. There are no formal models for estimating archaeological potential for historic resources for southwestern Ontario, and there is no inventory of historic sites by MCC. Consequently, these data have to be derived from historic maps. Two criteria were considered relevant for this study.

(1) Pioneer roads: Because there are few comprehensive maps showing site-specific locations prior to 1870, major pioneer roads, having been the focal point of early development, are useful for discovering previously unrecorded sites. Several pioneer roads were crossed by the proposed pipeline corridors. A zone of 200 metres on either side of a road was identified as having high potential. Data were collected from early road maps dating between 1800 and 1850 and having a scale of approximately 1:250,000.

(2) Potential historic archaeological sites: These sites represent locations of historic built structures as indicated on historic maps dating from c.1870 to 1930 for the study area. These structures may still be standing or represented only by archaeological remains. The locations mapped for this study included the industrial, ceremonial, public institutions, and major commercial sites (eg, churches, schoolhouses, cemeteries, grist mills). Unfortunately, owing to the large number of residential farmsteads, these sites had to be excluded at this general level of assessment. For single or small clusters of structures, areas of high archaeological potential were defined as having a radius

of 100 metres from the centre of the site/cluster. For larger clusters of structures, such as the community of Mount Brydges, the perimeter of the area with the greatest potential for historic sites was determined from historic maps. Data were collected from historic maps made between approximately 1870 and 1930 and having scales ranging from 1:40,000 to 1:63,360. All structures (excluding farmsteads) located within the study corridors were recorded.

Numerical Coding and Evaluation

For the assessment, the mapped criteria were tablulated for each corridor. The distance of the pipeline corridor through a sand plain or spillway channel was measured in kilometres while the remainder of the criteria were totalled. The alternative corridors were compared and evaluted on the basis of the totals for each of the archaeological resource potential criteria.

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CONSULTING WORK OF SCARLETT JANUSAS AND ASSOCIATES: SOUTHERN ONTARIO

Scarlett E. Janusas

In 1989 the consulting firm of Scarlett Janusas and Associates Inc. conducted five archaeological resource assessment projects in the regional municipalities of Halton, Peel, and York, and near Cainsville in the Brantford area. Field crew varied in size from two to four individuals under the direction of Scarlett E. Janusas and/or Jeff Bursey. All projects were funded by developers.

The archaeological resource assessment of sites 21T-89023C, Town of Caledon, 19T-82059, Town of Vaughan, 21T-87072-M, City of Mississauga, and 24T-89001, Regional Municipality of Halton resulted in the recovery of find-spots or sites (AiGx-159) that were not recommended for additional mitigation.

The archaeological resource assessment of the Highway 2/Highway 403 segment near Cainsville was suggested by the adjacent presence of the Cooper site (AgHb-19). Exploratory trenching of the lands to be affected by highway development, coupled with monitoring of topsoil stripping and shovel shining, resulted in the location of one possible feature and several post moulds. Because of disturbance resulting from development, the majority of artifacts recovered were not found *in situ*. No consistent pattern was observed in the distribution of post moulds, and efforts to "chase the wall" proved unsuccessful. While thirty-three artifacts were recovered, there was only one analysable rimsherd. This rim represents a pottery type which falls between Ontario Horizontal and Iroquois Linear, suggesting the presence of a Uren-Middleport component. Unfortunately, this rim was located out of context in an historic fence-post mould. No further archaeological work was recommended on this site.

9 Aura Lea Blvd, Weston, Ontario, M9M 1K2
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ARCHAEOLOGY DIVISION, REGIONAL MUNICIPALITY OF WATERLOO: RESULTS OF THE 1989 FIELD SEASON

Scarlett E. Janusas

The Archaeology Division of the Regional Municipality of Waterloo conducted fifteen archaeological resource assessment projects in the cities of Kitchener, Waterloo, and Cambridge and the Townships of Wilmot, Woolwich, and Wellesley. In addition, the Archaeology Division undertook three mitigation projects in the cities of Kitchener and Waterloo and the Township of Wilmot. Field crew varied in size from two to six individuals under the direction of Scarlett E. Janusas and/or John MacDonald. Seven of the projects were funded in-house and all other projects were funded by developers.

The archaeological resource assessment of three properties (Nith River Bridge replacement, Wellesley; 30T-89004, Cambridge, and 30T-88013, Waterloo) did not recover any archaeological cultural material.

Several assessments resulted in the discovery of isolated artifacts (30T-88030, Kitchener; 30T-88031, Cambridge; Donald Martin Farm, Woolwich; Zone Change Application 7/89, Woolwich; part of Lot 23, SBR, Wilmot Township; 30T-86033, Wellesley; and monitoring of possible Bush Inn location, Kitchener). No further mitigation was required for these areas.

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HELMUTH AND NUHRGANG SITES

The archaeological resource assessment of 30T-88055, Wilmot Township, resulted in the location of the Helmuth site (AiHe-35) and the Nuhrgang site (AiHe-36). The Helmuth site was surface collected on three different occasions but no diagnostic materials were recovered. The Nuhrgang site is located adjacent to the floodplain of the Nith River and consists of four widely distributed artifacts. One fragmentary biface of Bayport chert of large size suggests either a Middle Woodland or Paleoindian affiliation. Recommendations were made for monitoring of topsoil stripping of the area.

MORNINGSIDE SITE

The archaeological resource assessment of 30T-76024 (Phase III), Wilmot Township, located the Morningside site (AiHe-34). The preliminary assessment of the subject property recovered thirteen artifacts — six flakes, one retouched flake, two microscrapers, a biface fragment, a projectile point tip, one piece of

chert shatter, and a Middle Archaic projectile point. The site is situated above the bluff of the Nith River, extending to the break in slope approximately 100 metres to the north. After several surface collections, topsoil stripping activities were monitored. Only one feature was detected during this process: a single post mould with a diameter of 8 centimetres and a depth of 10 centimetres.

Because of the lack of subsurface features, the Morningside site appears to have been of short-term duration, though it may have been used intermittently over the long term. This is suggested by the wide scatter of artifacts and the recovery of two cultural diagnostic projectile points: a Brewerton side-notched point and a Lamoka point.

Site function is suggested by the varieties of tools. The flakes and projectile-point preform indicate that the tools were manufactured and modified on site. The utilized flake and three scrapers indicate that food processing and/or other work activities were occurring on site. Both projectile points have missing tips; one loss caused by impact fracture indicates that the point was recovered after use, probably following a kill.

SOLOMON SITE

The archaeological resource assessment of 30T-89005, Woolwich Township, recommended that the Solomon site (AjHd-17), probably an historic school house, be mitigated.

CAMBRIDGE

A partial resource assessment of 30T-87008, Cambridge, resulted in the location of twelve sites and twenty-four findspots. All of these sites and findspots have been recommended for additional mitigation.

An archaeological resource assessment of Cambridge Business Park, City of Cambridge, resulted in the location of nine findspots and three sites: AiHc-93 (recommended for mitigation), AiHc-94, and AiHc-97.

Following several surface collections of AiHc-93, the site was monitored during topsoil stripping. One hearth was located, circular in planview, with a diameter of 65 centimetres. The profile was basin-shaped, with a layer of small stones lining the bottom of the feature.

The hearth, in association with recovered material, suggests a temporary campsite of unidentified prehistoric cultural affiliation. Bulk soil samples from the hearth were processed by flotation for plant macrofossils. No macrofossils were recovered, suggesting that the hearth was used primarily, if not exclusively, for warmth and light.

BLEAMS ROAD, CORDUROY ROAD, WILLIAMSBURG I AND II

Archaeological investigation was conducted on the Bleams Road-Corduroy Road (AiHc-92) and on the previously registered Williamsburg I (AiHc-55) and Williamsburg II (AiHc-56) sites, Kitchener. Topsoil stripping of Williamsburg II revealed several twentieth-century ash-pits containing glass and modern refuse.

The Bleams Road-Corduroy Road site was located in 1987 through bore-hole data and excavation revealed twelve logs of the corduroy road. Excavation and monitoring showed that refuse attributed to the preparation of logs was used for the base of the road; log width ranged from 0.45 to 1.55 metres; logs were sometimes split and both sections used for the road; road width measured 6.2 metres; tree species was probably cedar; trees were felled with an adze or similar tool; preservation conditions were good;

the road was built of a single layer of logs; and depth of earth covering the original corduroy road was approximately 8 centimetres.

Topsoil stripping of the Williamsburg I site revealed the outline of an historic structure measuring 4.2 by 7.6 metres. The foundation is irregular, though the irregularity is probably due to demolition of the building rather than original construction. If infilling of the demolished structure is contemporaneous with the recovered artifacts, the structure could date between c.1850 and 1875.

COLUMBIA STREET CORDUROY ROAD

The Columbia Street Corduroy Road (AiHd-80) in Waterloo was located during construction of the Columbia Street expansion. An area of approximately 15 square metres was excavated through the road, allowing profiles to be drawn and photographs taken. Observations indicated that the tree species was probably cedar; the present condition of the wood is exceptionally good; the road was buried beneath at least 2 metres of overburden; and the road consisted of a double layer of logs laid parallel to each other and separated by a layer of earth.

The construction plan for this area includes burying the road under at least 6 metres of fill. Given the current depth of at least 2 metres and the anticipated 4 metres of overburden, the corduroy road is afforded a measure of protection from development impact.

CONSULTING ACTIVITIES OF SETTLEMENT SURVEYS LIMITED IN NORTHERN ONTARIO

John Pollock

In 1989 Settlement Surveys Limited made a number of archaeological impact assessments. Projects were undertaken at or near Lake Abitibi, Lake Superior, Temagami, and Timmins. Although a total of eleven projects were completed, only the most interesting are described in this report.

RED SQUIRREL ROAD EXTENSION, TEMAGAMI

During the summer of 1989, at the request of the Ontario Ministry of Natural Resources, an archaeological impact assessment was undertaken of the controversial Red Squirrel Road Extension. The fieldwork recorded a total of three sites (ChHb-6,7,8) present on the proposed right-of-way, and an additional three sites (ChHc-3,4,5) were reported off the proposed road alignment. The three threatened sites were located at the Diamond-Wakimika portage. This portage, situated at the heart of a major and popular canoe route, contained three prehistoric sites along its 860-meter length, ranging from Shield Archaic to Late Woodland in age (figure 1). The most interesting site was the Wakimika site (ChHb-8). This site is a large buried prehistoric occupation relating to Initial and/or Late Woodland cultures 500 BC-AD 1400 (2500 to 600 years old) and was undisturbed by modern-day camping or the initial clearing of the road (which was done in winter). The site contains at least two known features or hearth areas with faunal and lithic remains and there is a good possibility that additional features are also present. Relatively little excavation has been undertaken on similar prehistoric sites in the Temagami area and such large undisturbed sites are rare at present. Because of the potential scientific, interpretive, educational, and Native heritage value of the site and its location within the Obabika River Provincial Park, we recommended site mitigation consisting of a 100 per cent avoidance of impact. This was subsequently achieved by squeezing the right-of-way to the north. At the same time, the alignment of the road was shifted to avoid impact to the portage.

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ASSESSMENTS OF CULTURAL RESOURCES IN TEMAGAMI AREA PROVINCIAL PARKS

John Pollock, assisted by Doug Hamilton and Julia Patterson of the Ministry of Natural Resources and four crew, made up the staff for this project. This preliminary park cultural inventory project consisted of an archaeological survey of four high-potential areas within the extensive Temagami area provincial parks system. As a result of the work, twenty-eight prehistoric and historic archaeological sites were field assessed and recorded in the fall of 1989. A complete range of sites was located, including isolated finds, cache, and vision-pit sites, small and large campsites, burial sites, religious sites (rock art pictographs and rock features), quarry sites, historic cabin sites, and lumber camps.

Based on these results, a five-year district-wide site inventory, assessment, and salvage program was recommended. Besides providing scientific and educational information allowing for proper park and comprehensive planning, this project will provide the basis for one or more heritage tourism attractions.

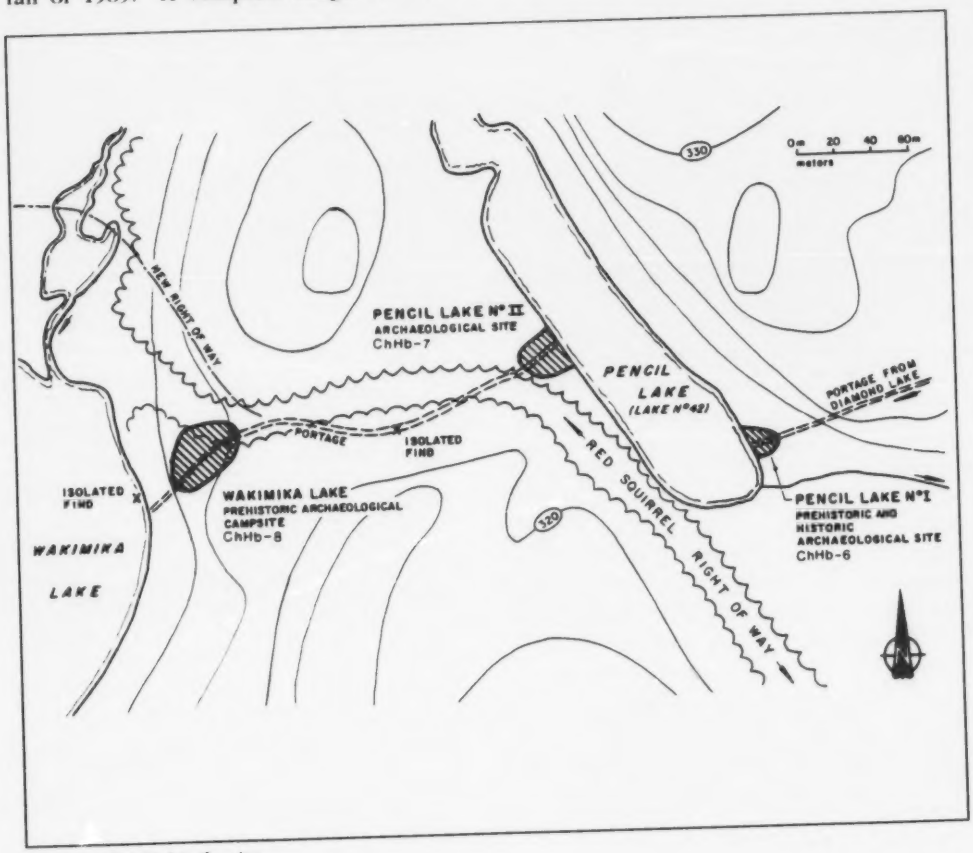

Figure 1: The Wakimika site

ARCHAEOLOGICAL SERVICES INC.: ARCHAEOLOGICAL ASSESSMENTS IN THE PROVINCE OF ONTARIO

Ron Williamson

In 1989 a new office and division of the firm was opened in London, Ontario. Under the direction of Robert Pihl, this division will focus on utilities work across the province. The Toronto head office continues to operate under the direction of Dr Ron Williamson. In 1989 ASI conducted more than eighty pre-development assessments. Exploratory investigations or salvage excavations were conducted on thirty additional sites. This research resulted in the registration of 129 new archaeological sites. In addition to seventeen permanent staff, thirty-three people were employed seasonally on projects concentrated in the Hamilton, Kitchener-Waterloo, Richmond Hill, Barrie, London, and Metropolitan Toronto areas.

ARCHAEOLOGICAL SALVAGE EXCAVATIONS OF EURO-CANADIAN HOMESTEADS

The 1989 field season commenced with a number of nineteenth-century site salvage excavations that were directed by Dr Shaun Austin. They included work at the Devil's Pulpit site (AlGx-9) in Caledon, the Flicka site (AkGw-18) in Brampton, two sites in Mississauga (AjGw-140, AjGw-141), and the Fieldgate site (AlGv-82) in Vaughan. These sites were discovered during pre-development assessments in 1988 and had been recommended for further excavation in order to document the extent and nature of any subsurface archaeological deposits.

ARCHAEOLOGICAL RESOURCE ASSESSMENTS — UTILITIES DIVISION

The Utilities Division of ASI conducted a number of assessments, including a survey of selected high-potential areas within the Indian/MacGregor Creeks Flood Diversion Project area near Chatham, resulting in the discovery of four sites and numerous Early to Late Archaic and Late Woodland components. One of these sites, a small Late Woodland campsite (AcHm-34), was excavated and the remains of a small lean-to or windbreak structure were identified. A routine survey of a subdivision in Niagara-on-the-Lake resulted in the discovery of a substantial Middle Archaic site as well as remains relating to the early nineteenth-century occupation of the property. The latter may be associated with the regi-

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mental barracks of nearby Fort George, which were used by Butler's Rangers in the late eighteenth century. The barracks were situated immediately north of the property. Test excavations on both sites are proposed for 1990.

ARCHAEOLOGICAL SITE POTENTIAL MODELS

Ontario Hydro contracted ASI to develop an archaeological site potential model for use in its Niagara River Development project. This work included building and analysing a site database for the project area. ASI also conducted surveys on two legs of Ontario Hydro's major transmission line from Longwood Transformer Station, just west of London, to its Nanticoke Generating Station on Lake Erie. During these surveys, seventy-eight sites spanning most of Ontario's settlement history were located. During the fall, a portion of a prehistoric Iroquoian village (AeHg-58) was investigated and test excavations were conducted on eight other sites.

Another study, also commissioned by Ontario Hydro, represented a nexus in an ongoing research program designed to review, develop, and improve approaches for evaluating prehistoric archaeological site potential in the context of preapproval environmental assessment (EA). The purpose of ASI's work was to review the range of approaches that have been used by archaeologists to predict prehistoric site potential. The report presents discussions of the theoretical and practical implications of each approach and makes recommendations regarding their application. Since many of these approaches involve the compilation of ecological and palaeoecological data, the objectives of ASI's study were to avoid duplication of effort with other aspects of EA research and to provide Ontario Hydro planners with the basic tools necessary for the successful design and implementation of large-scale studies of prehistoric archaeological site potential.

SALVAGE EXCAVATION OF THE PARSON SITE

The Late Iroquoian Parson site (AkGv-8) had been reviewed in an assessment of a proposed Metropolitan Toronto Works Department watermain in North York during 1988. In 1989, in advance of construction that would bisect the site, a 90-metre-long by 18-metre-wide area was excavated and revealed evidence of seven longhouses. While the bulk of the 4-5-hectare site lies outside the watermain corridor, more than 124 features were recorded. These data will supplement information previously collected from excavations conducted by Dr Norman Emerson of the University of Toronto and an avocational archaeologist, John Morrison, and the report will contain the first graphically illustrated settlement pattern data from the site.

SALVAGE EXCAVATION OF THE DUNSMORE SITE

In July a crew of five under the field direction of Richard Sutton initiated excavations at the Dunsmore site (BcGw-10), a 2-hectare Middle Iroquoian village located near Barrie, Ontario. The site had been previously noted in 1906 by A.F. Hunter, whose survey work in Simcoe County is well known. A radiocarbon date of 620 ± 60 yr BP (GSC-2663) was obtained by James Hunter during his investigations in 1977 and is consistent with the ceramic assemblage recovered. ASI's work in 1989 resulted in the discovery of fifteen small cabins and longhouses and several midden areas. The structures

Figure 1: A double-headed ceramic effigy recovered from the Dunsmore site (BcGw-10), Barrie, Ontario

exhibited considerable variability in length and relative placement within the community. A palisade was not found. Initial analyses indicate that some of these structures were occupied seasonally and that the site's function may have evolved through time. Perhaps the most striking artifact found during the excavation was a double-headed ceramic effigy that was once part of a smoking pipe (figure 1).

SALVAGE EXCAVATION OF THE PROSPECT HILL CEMETERY, NEWMARKET

In late June ASI was retained by a Barrie contractor to investigate a nineteenth-century cemetery disturbed by the construction of a retirement home in Newmarket, Ontario. Dr Shaun Austin and a crew of six carefully exposed, documented, and removed fifty-seven articulated burials and investigated an additional sixty-three grave shafts, including an elaborate brick coffin chamber. The cemetery appears to have been the burying ground of the Trinity Methodist Church, which occupied the site between 1824 and 1881. In the late nineteenth century the property was sold to the school board so that the adjacent public school grounds could be expanded. Town of Newmarket planning officials thought that all of the burials had been removed to the nondenominational Newmarket Cemetery, since an 1882 newspaper advertisement had advised relatives of the deceased to arrange for their disinterment and reinterment in the new cemetery. Unfortunately, nearly half of the bodies were not moved. Forensic analysis of the remains was undertaken by Dr Susan Pfeiffer and Chris Dudar of the University of Guelph (Pfeiffer, Dudar and Austin 1990).

ARCHAEOLOGICAL RESOURCE ASSESSMENTS OF ONTARIO HERITAGE FOUNDATION PROPERTIES

Assessments were completed at two Ontario Heritage Foundation properties: the Chedoke Estate, located in Hamilton, Ontario, and the Inge-Va Estate in Perth. The Chedoke Estate was built by William Scott Burn, a grain merchant who constructed this twelve-room stone house in 1836-7. A two-week archaeological assessment was conducted, during which 394 test units were excavated in areas that had previously been identified as worthy of archaeological investigation in an independent evaluation of the property. Surprisingly, most of the test units yielded, in addition to some artifactual remains relating to the nineteenth-century occupation of the property, ceramics and lithics dated tentatively to the late prehistoric period (the early fourteenth century). The prehistoric site was named Chedoke Falls (AhGx-265). Unfortunately, the artifact assemblage is too small to assign a precise cultural or temporal affiliation and the settlement data are too limited to define the exact nature of the occupation. The discovery of a large prehistoric settlement on the property is consisent with local reports that a limestone ledge behind the house, now accessed from below the top of the escarpment, was an "Indian Burial Cave."

In July a three-week test excavation was conducted at the Inge-Va Estate. Fieldwork was designed to locate archaeological deposits relating to the construction of an earlier building where the present garage is situated, the construction of the south veranda, and the placement of various outbuildings. Dr Stephen Monckton, ASI's paleoenthnobotanist, also conducted an investigation of changes in the organi-

Figure 2: Examples of trade metal artifacts recovered from the surface of the Plater-Martin site (BdHb-1), Collingwood, Ontario. The middle object is a rolled copper pipe.

zation of the gardens and landscaping of the grounds through time. This included a modern vegetation study, in which prominent species were noted, and a paleobotanical investigation involving both pollen and seeds.

ARCHAEOLOGICAL ASSESSMENT OF THE PLATER-MARTIN SITE

In October, Williamson, with the assistance of Charles Garrad, directed a detailed surface assessment of the Plater-Martin site (BdHb-1), an historic Petun village near Collingwood, Ontario. The site was previously investigated by a number of archaeologists, most notably Mr Garrad, who conducted licensed excavations in 1975 and 1976. Interest in the site may be attributed to the belief that the site is the Jesuit mission of St Mathieu, although early researchers thought it was the mission of St Simon/St Jude. As the greater portion of the site is located in a farm field, a controlled surface survey was undertaken to establish the extent of the site within the field, to recover diagnostic artifacts, and to detect the presence of subsurface features through the clustering of artifacts. This resulted in the documentation of four new middens and the recovery of over 700 artifacts, including items manufactured from limestone, conch shell, and trade brass (see figure 2). Indeed, artifacts such as those illustrated in figure 2 are relatively rare. Their ubiquity in the plough zones of sites of this period suggests that the topsoils of such sites should be hand-excavated.

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FIELD SCHOOLS

BOYD ARCHAEOLOGICAL FIELD SCHOOL

Robert W.C. Burgar

The Boyd Archaeological Field School is a senior secondary-school history credit course (grade 12) approved by the Ministry of Education. The field school is offered jointly by the Royal Ontario Museum (ROM), the Metropolitan Toronto and Region Conservation Authority (MTRCA), the North York Board of Education, and the Town of Vaughan. The program was conceived in 1974 by Tom Barber and Terry Carr (MTRCA), Dr Peter Storck (ROM), and Ray Reid, then head of history at Newtonbrook High School in North York, with the encouragement and direction of professional archaeologists and educators from a number of additional institutions.

The field school operates out of the Boyd Conservation Field Centre located in the former Garfield Weston mansion near Kleinburg. The students participating in the course stay at the centre for the duration of the three-week August program. The centre's classroom facilities are used for lectures and workshop sessions directed by Mr Reid, the academic principal of the course. Many prominent archaeologists and educators give lectures and conduct workshop sessions. Guests have included Dr Storck, Dr Mima Kapches, Anne McLaughlin, and Marilyn Jenkins of the Royal Ontario Museum, Dr Howard Savage and Dr Gary Crawford from the University of Toronto, Dr Shelly Saunders of McMaster University, Dr Conrad Heidenreich of York University, Mark Whitcombe of the East York Board of Education, and Peter Hamalainen of the Toronto Board of Education. Topics have included floral, faunal, lithic, and ceramic analyses, physical anthropology, and a variety of lectures on many aspects of Ontario and world prehistory.

During the past fifteen years archaeological excavations have been conducted on the Late Iroquoian Seed-Barker and Boyd sites in the Boyd Conservation area and at the MacKenzie site in Woodbridge. The main objective of the field school is to introduce the participants to the prehistory of Ontario through a "hands-on" learning experience (eg, field and laboratory work). Since the education of the student is the primary goal, participants should expect to learn, rather than to be used as cheap labour for research. The

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direction taken by the school is to separate the program into two equally important components with unique but closely related objectives. This approach is best facilitated by splitting the students into groups, one on the site and the other at the field centre receiving classroom instruction. Daily alternation of the groups ensures that each receives equal instruction in both areas.

Since 1983, 247 students have successfully completed the program. During the course, 1020 square metres of topsoil have been excavated at the Seed-Barker site and the students have recovered 175,000 artifacts and exposed various components of nine structures, including several longhouses. On the Seed-Barker site (figure 1) the longhouses are approximately 27 metres long and 7.5 metres wide. The walls and ends of these houses are made of a staggered row of closely spaced posts set into "wall trenches," architectural features which are relatively rare on Iroquoian sites. In 1989 and 1990 a cabin was completely exposed on the Seed-Barker site during the course of the field school. Portions of a fish effigy smoking pipe were recovered from this structure (figure 2).

Over the past seven years approximately 700 culturally diagnostic rimsherds representing 629 different vessels have been recovered from the Seed-Barker site, indicating that the occupation dates from Late Iroquoian times (c.AD 1550-70). The specific cultural affiliation of the occupants of the site has sparked some debate in recent years. Wright (1966) originally attributed this occupation to Proto-Huron and/or Proto-Petun. Ramsden (1977) argued for initial settlement by a Neutral popuation, while Noble (1984) suggested the reverse — that the Seed-Barker group migrated to Neutralia. It is suggested here that the presence of lip-notching and cord-marking may ultimately prove to be a product of Seneca and Fort Ancient influence and may indicate that the Seed-Barker site was a focal occupation in the Humber Valley and important in the development of the Petun. Unravelling the mysteries of the enigmatic "Seed-Incised" rim type may be of great importance in this debate.

Along with the skills and discipline acquired by students in their three-week stay at the field school is one lesson that helps to change their way of thinking about archaeology and, indeed, about past (and present) cultures and peoples. They learn that uncovering artifacts — "finding things" — is not an end in itself but rather the first step towards a greater understanding of the human events that lie behind the broken tools and other discarded items that make up the archaeological record.

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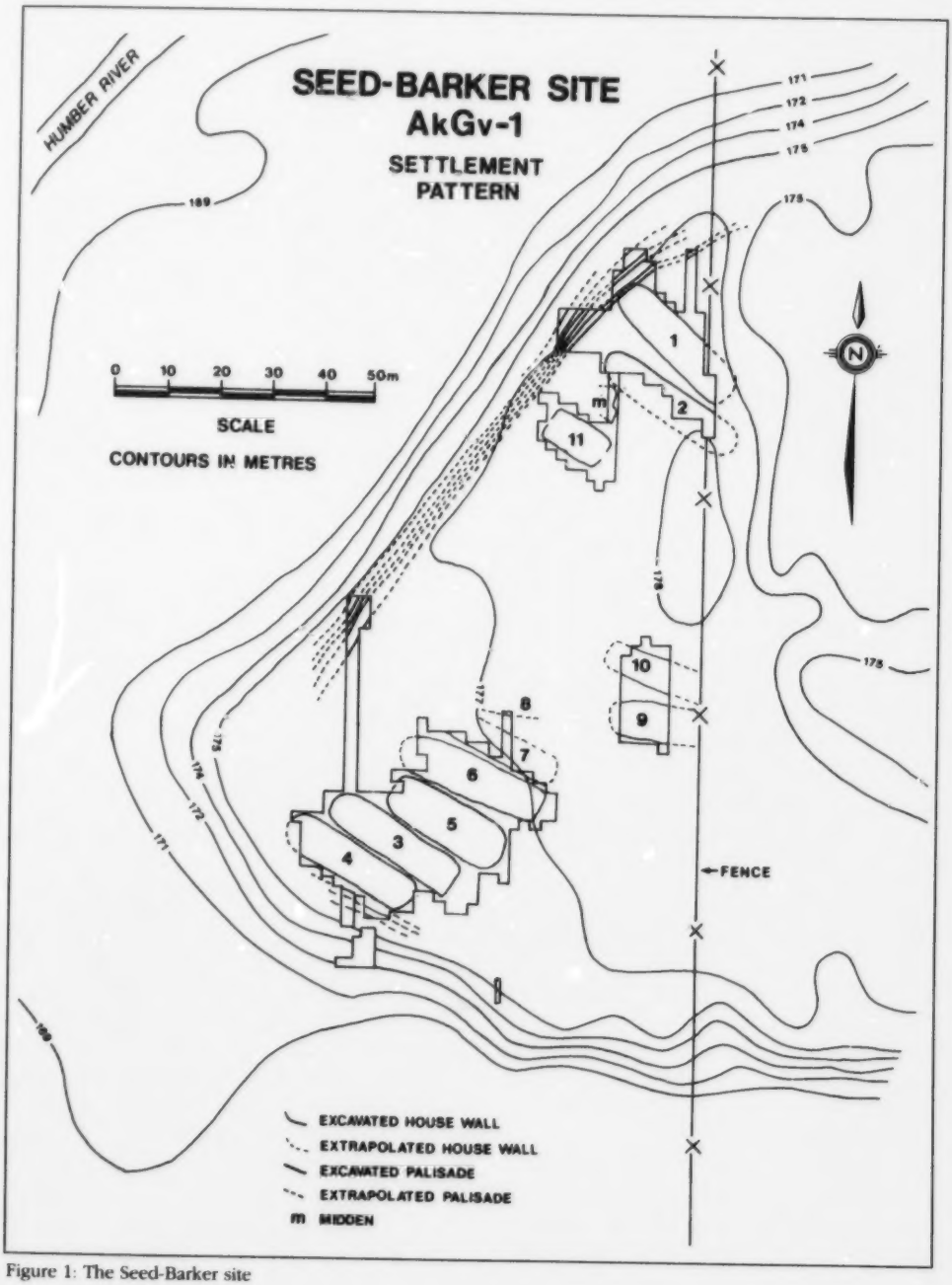

Figure 1: The Seed-Barker site

Figure 2: A fish effigy smoking pipe excavated from the Seed-Barker site in 1989

ACTIVITIES OF THE ARCHAEOLOGICAL RESOURCE CENTRE, TORONTO BOARD OF EDUCATION

Peter Hamalainen

In 1989 the Toronto Board of Education's Archaeological Resource Centre conducted the excavation of the Leslieville Public School site (AjGt-2), a nineteenth-century property inhabited by Thomas Wilds, a market gardener. The site is located on the premises of Leslieville Public School, near the intersection of Dundas Street East and Jones Avenue. The project was funded by the Toronto Board of Education and supervised by Peter Hamalainen.

The project lasted from mid-May until the end of October. Following the practice of prior seasons, classes from grade 4 through adult participated in the excavation in the spring and the fall, while in July and August the site accommodated the Toronto Board of Education's two archaeological field schools as well as community groups. Volunteers were encouraged to participate throughout the season.

The site has served as a schoolyard from 1912 to the present. Prior to 1912 the land belonged to Thomas and Johanna Wilds, market gardeners who farmed the property as early as 1852. Most of their land was used for growing vegetables. Their house was located in the southwest corner of their property. The excavation grid was placed over the anticipated location of the house in an attempt to determine the exact location of the building and aspects of its construction.

The site area was divided into thirty-nine 2-metre squares, with baulks separating them (see figure 1). The squares were oriented diagonally across the site from the northwest to the southeast, since the documentary evidence indicated that the house walls were oriented north-south and east-west. The diagonal orientation of the site grid ensured that the location of the house walls would become readily evident within the squares and not be lost beneath the baulks, as could happen if the orientation of the site grid corresponded to that of the house.

Because the area had served as a schoolyard since 1912, much of the information recovered in the excavations related to twentieth-century schoolyard activities. Excavation revealed that the schoolyard had been built up at least twice. At

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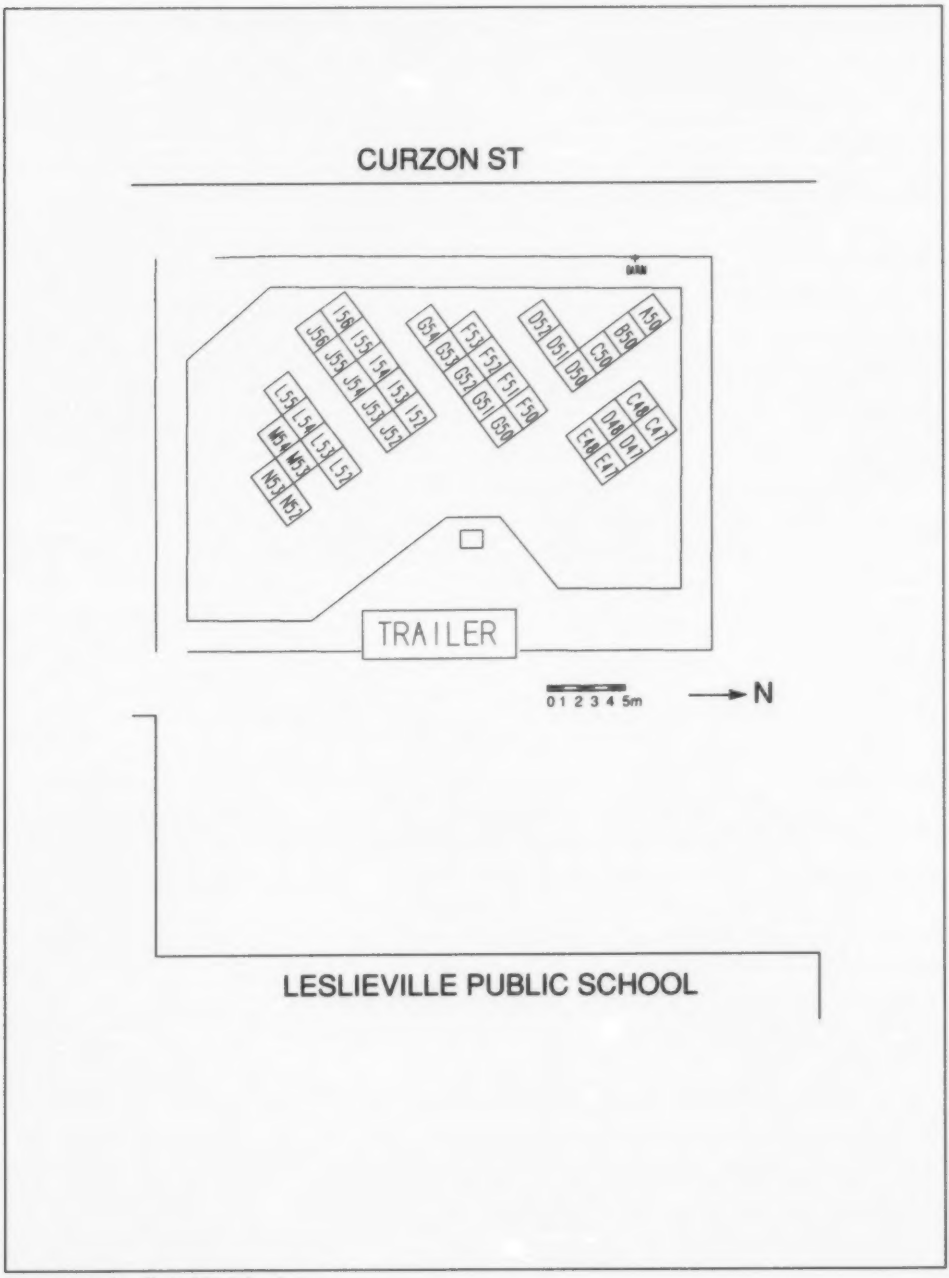

Figure 1: Leslieville Public School site

both times the area was graded and a layer of fill laid down. The artifacts in the fill came from a mixed content and dated to both the nineteenth and twentieth centuries.

Features relating to the Wilds's occupation were uncovered beneath the schoolyard layers. The house was found not to have had a basement, but a root cellar. The cellar was clearly marked by its wood flooring, which was covered with a thick deposit of sandy clay, plaster, and mortar at the time of the house's destruction. The outline of the house itself was defined by thin black stains left by boards laid edgewise on the ground. Other features relating to the house consisted of large post moulds filled with brick and rubble, which are interpreted to have held support columns for the house.

Beneath the house, features such as garbage pits and plough marks reflected activities pre-dating the house. The excavations also uncovered evidence of the garden located north of the house. The deposits in this location had been seriously disturbed by the grading accompanying the buildup of the schoolyard. As a result, the only features which could be attributed to nineteenth-century activities were a few small post moulds, garbage pits, and pits believed to have been formed as the result of planting activities.

It is possible that the site may also have been occupied during prehistoric times. Two artifacts suggest this occupation: a chert blank, which is not culturally diagnostic, and the other a basal fragment of a projectile point identified as belonging to the Meadowood Culture (1100-500 BC). The point base was found close to a deposit of bright red oxidized soil, possibly the remains of a camp fire. Unfortunately, the two artifacts occur in an area which was heavily disturbed by the building of the Wilds's house and, therefore, their original context cannot be determined.

BRUCE FIELD SCHOOL: EXCAVATIONS AT THE MASON SITE

James Molnar

The Bruce County Board of Education ran another successful field school at the Mason site in July 1989. Twenty-one students took part in a program similar to the first Bruce field school of 1987. Excavations were lead by James Molnar with the assistance of Elise Sherman. The school was funded by the Board of Education and a grant from the Ministry of Culture and Communications. An award from the Uni-versity at Albany—SUNY Benevolent Association covered the faunal analysis. During the three weeks of the field school the students excavated 26.5 square metres and unearthed a vastly different range of data from that of 1987.

Excavations took place closer to Boat Lake than in the earlier year, the better to define the distribution of remains. The Odawa occupation at Mason yielded more evidence of lithic reworking, many small retouch flakes, and tiny curved notching flakes (Titmus 1985). Additional Iroquoian-like pottery and a rolled copper/brass bead were also discovered. One hearth was found that may relate to the Odawa occupation of the site.

In the second week of the school, the students discovered an extensive nineteenth-century historic occupation of the site. This component is represented by few artifacts but many subsurface stains. Finds include a machine cut nail, eye screws, thin pane glass, and three white seed beads. Together, this assemblage dates from the period 1830-50 (Ian Kenyon: personal communication). The features are all linear stains that run at right angles aligned to the cardinal directions. Because of plough truncation, the stains are very thin in profile, often no more than 2 centimetres thick. Profiles of the wider stains are round on the bottom, suggesting that they were originally logs laid on the ground. The overall pattern appears to represent a series of structures or foundations. There are at least three such stains, and they extend over the length of the entire excavated area. As the excavation units were arranged in an east-west line, no corners or external walls have been found.

The faunal remains analysed by Rosemary Prevec could be associated with either the seventeenth- or nineteenth-cen-

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tury occupations. All pieces recovered are small or fragmented. Mammals include beaver, muskrat, white-tailed deer, and bear. The bear is represented by three burnt toe bones. Fish include sturgeon, bowfin, and members of the sucker and walleye families.

There is no solid evidence of the identity of the people who built the structures at the Mason site. One set of possible nineteenth-century users of the site are Methodist missionaries who travelled from Toronto via Lake Simcoe to the Ojibwa at the mouth of the Saugeen River. Their travels and a description of the portage route across the Bruce are documented for the 1830s (Bowman 1975). Another possibility is that the structures were built by land surveyors when this part of the peninsula was surveyed in 1855-6 (Bowman 1975). Boat Lake would have been a logical place for their base camp, since the river system allows access to much of the lower peninsula.

The next field school in 1991 will concentrate on the nineteenth-century occupation, with the object of recovering complete floor plans and a wider range of artifacts from these structures.

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SITE/PROJECT SPECIFIC ACTIVITES

THE ADDER ORCHARD SITE: A BROADPOINT OCCUPATION IN SOUTHWESTERN ONTARIO

Jacqueline A. Fisher

Jacqueline Fisher, a Masters degree student at McMaster University, supervised a seven-week excavation at the Adder Orchard site (AgHk-16), a Late Archaic Broadpoint occupation. The site is located in the vicinity of the town of Thedford in Bosanquet Township, County of Lambton. The field crew consisted of Joseph Muller and two other university students, Alison Ariss and Joel Reimer. The excavation and subsequent analysis were funded by The Ontario Heritage Foundation.

The site was first discovered by landowner Frank Wight and was later reported by Brian Deller and Christopher Ellis in 1981 (Kenyon 1983). Bill Fox and Ian Kenyon observed lithic scatters and "patches of carbonized material, including nutshell, seemingly associated with the debitage concentration." Fox and Kenyon then excavated two test pits at these concentrations, and two features yielded the dates 2360 ± 90 (I-12481) and 3850 ± 90 (I-12480) (Kenyon 1990: personal communication).

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Excavation Licence 89-139A

The purpose of the 1989 project was to locate features to obtain more data pertaining to site function and structure, season of occupation, the age of the occupation(s), and subsistence patterns of the Broadpoint people.

The 1989 excavation centred around two surface debitage concentrations which were approximately 40 metres apart. The northern concentration is designated Grid A; the southern one Grid B. The excavation revealed twenty-seven features: two in Grid B and twenty-five in Grid A. Most features contained only a small amount of cultural material; two feature clusters in Grid A, however, produced numerous artifacts and debitage. Artifacts are predominantly of Kettle Point chert and include cores, preforms, biface fragments, complete Adder Orchard points, and utilized flakes.

Three radiocarbon dates (processed by the University of Waterloo) were obtained for feature numbers 16 (Grid B), 6E and 8 (south and north ends of Grid A, respectively). Feature 16 is dated to 4040 ± 100 yr BP (lab 23081); feature 6E to 4000 ± 90 yr BP (lab 23079); and feature 8 to 3950 ± 130 yr BP (lab 23080).

Data recovered will aid in defining intrasite structure, lithic procurement and reduction strategies, and subsistence patterns.

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"WHO PASSED THIS WAY?" ARCHAEOLOGY AT THE FALLS

Colleen Halverson

Colleen Halverson directed an eighteen-week excavation project at the Nestor Falls site (DgKl-3). This is a multicomponent site containing Archaic, Middle and Late Woodland, and fur-trade material. The site is located on the north shore of Nestor Falls in the hamlet of Nestor Falls in Godson Township in the district of Kenora and occurs in a designated highway picnic area. The field crew of ten individuals included the director, a field/lab supervisor, two senior field workers, one post-secondary field worker, and five high school students. The project was funded in part by the Ministry of Northern Development and Mines, the Ministry of Culture and Communications, The Ontario Heritage Foundation, the Onegaming Indian Reserve, and the Nestor Falls Local Services Board.

The Nestor Falls site was discovered in 1972 by Ministry of Natural Resources field staff who were informed by a local collector. It was assigned a Borden designation in 1981 by C.S. Reid. The site was surface collected and its condition updated in 1987 by Georgine Pastershank (1987) as part of her Sabaskong Bay survey. Since the site occurs in a designated picnic area, the 1989 excavations were initiated as mitigation because of proposed upgrading to the park's facilities. Because of the close proximity of the site to Highway 71, a major highway in the area, it was decided to organize the mitigation work as the second project in the Ministry of Culture and Communications "Who Passed This Way?" public archaeology program. This program provides the general public with the opportunity to view and participate actively in an archaeological excavation (see figure 1).

The excavations were conducted following Ministry of Culture and Communications guidelines and consisted of one large block of thirty 1-metre units and one smaller block of twelve 1-metre units. The smaller block was established so that a rain shelter could be utilized on those days of inclement weather. Unfortunately, these units could not be completely excavated because of the immense amount of archaeological material recovered which slowed excavation and because of delays caused by poor weather conditions. At the end of the field season, the site was excavated to approximately one half of its depth. Although the

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Excavation Licence 89-112C

site was partially disturbed in 1979/80 when the Ministry of Transportation levelled off the area with fill from a local garbage dump, the effect to the excavations was minimal. Presently, excavated material from the site includes approximately 49 Late Woodland and 121 Middle Woodland vessels, 30 complete and fragmentary projectile points, 27 bifaces and biface fragments, 1 chopper, 1 groundstone adze, 2 pipe fragments, 113 scrapers and unifaces, and numerous hammerstones, cores, and waste flakes (see figure 2). The fur-trade artifacts include jingle cones (used in decorating clothes and bags), a musket ball, and several beads of different varieties. A large amount of burnt and calcined animal bone was also recovered. In addition to providing material for faunal analysis, this bone may also be useful for radiocarbon dating.

Excavations are planned to continue in 1990. This work will provide a more specific definition of site use, length of occupation (whether seasonally or permanent), and, possibly, number of occupants. It is hoped that the site will be related to the Manitou Mounds site surveyed by David Arthurs in 1975 and to other similar occupation and ceremonial sites.

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Figure 1: Stacey Bruyere, senior field worker, and volunteer Debbie Groom excavating level III

Figure 2: Late Woodland rim sherd and local chert core fragment *in situ*

EXCAVATION AND REASSESSMENT OF THE KANT SITE

Barry M. Mitchell

Work at the Kant site during 1989 occupied 120 man-days between April and November. Three volunteers with previous excavation experience, directed by Barry Mitchell of Deep River, Ontario, excavated a series of small tests in addition to a larger number of 1.5-metre squares. Twenty-three squares were examined at the southern extremity (Duquette site BjGg-4) and sixteen squares at the northern ridge (Kant site, BjGg-1). Three other individuals, members of the Ottawa Chapter of the Ontario Archaeological Society, assisted in determining the boundaries of the site. This was completed by excavating 1.5-metre squares placed on a horizontal grid at intervals of 15.2 metres. The excavation was supported by a research grant from The Ontario Heritage Foundation.

At the northern ridge, a feature consisting of an ovate body of fine white sand surrounded by gravel was first visible at 20 centimetres (just below the plough line). The source of this type of sand lies an average of 1.1 metres below the present-day surface. This feature could have been soil inversion caused by a fallen tree-root mass. However, some calcined bone and Initial Woodland pottery occurred in a stained area in the feature below the normal depth for the Initial Woodland cultural floor. Further investigation of the area adjacent to the feature may explain the inversion.

Some interesting differences among deposits in the northern and southern parts of the site are apparent. Characteristics of the north ridge deposits are relatively infrequent fire-cracked stone and high frequency of massive quartz spalls; considerable plough disturbance; the occurence of finished copper artifacts; and sediments consisting of sandy soil over coarse gravel with low artifact content. The south area (Duquette site) is littered with fire-cracked rock, has low quartz content, is less plough disturbed, contains crumpled copper sheet (no formed artifacts to date), and has sediments consisting of a shallow clay loam soil above limestone boulders. The cultural zone in the southern area yields a higher concentration of artifacts than does the north Kant ridge area. The north ridge produced a higher number of projectile points than scrapers, while the south side produced more numerous

P.O. Box 927, Deep River, Ontario, K0J 1P0
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scrapers. Because of the few squares excavated to date, it cannot be determined whether these differences have statistical significance and no explanation is offered at this time.

Ceramic recoveries from the Duquette site prove the presence of a lower statum containing Initial Woodland Vinette 2 ware (Ritchie 1944), a possible Laurel influence (Wilford 1955), and an intrusive Algonquin occupation. The Algonquin occupation produced ceramics having attributes of Middleport Iroquois ware (MacNeish 1952; Wright 1966). A radiocarbon date obtained on wood charcoal associated with Iroquois Linear rims supports the Late Woodland position.

New work must be organized to increase the size of the ceramic samples and to determine the representative contributions of each culture to the site occupation sequence. Also, adjacent shorelines of Wilber Lake should be surveyed to determine whether large or similar sites exist on the lake.

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EXCAVATION AT THE PATRICIA KOZAK SITE, THUNDER BAY DISTRICT

Joe D. Stewart

Joe D. Stewart of Lakehead University, assisted by one to eight volunteers, conducted a total of twenty-three days' excavation at the Patricia Kozak site (DdJm-3) in 1989. Located on private cottage property on the north shore of Lower Shebandowan Lake, approximately 70 kilometres west of Thunder Bay, the site was previously investigated in 1986 and 1987. A grant from The Ontario Heritage Foundation supported the 1989 fieldwork, as well as subsequent laboratory processing and technical analyses of the 1986, 1987, and 1989 recoveries. Supplementary funding from Lakehead University facilitated continuation of the laboratory work, in which Linda Larcombe supervised three student assistants.

Following the strategy established in 1987, the 1989 fieldwork entailed salvage excavation of an 8-square-metre area slated for property improvement. As in 1987, horizontal control was maintained within 1 by 1 metre units, each subdivided into quadrants, and vertical control was maintained by 3-centimetre levels, contoured to the present surface. Water-screening again was employed but mesh size was changed from quarter-inch to eighth-inch, in order to improve the recovery rate of small materials. As in the previously excavated areas, archaeological stratification was not discernable and the soil profile indicates evidence of turbation. Three small, vaguely defined pit features or disturbances were encountered.

Terminal or Late Woodland sherds, fragmentary burnt and unburnt faunal bones, and lithic debitage and tools predominate in the upper levels, along with historic materials. Middle Woodland (Laurel period) pottery, with the possible exception of one untextured body sherd, was absent, and no other diagnostic Middle Woodland artifacts were recognized. Among the historic materials were hundreds of small glass beads, which necessitated processing much of the excavated matrix by water-screening through window mesh. The Late Woodland and historic components were not stratigraphically separable and materials representing both were recovered from relatively deep levels in apparently turbated areas. Native copper nodules and artifacts occurred at various depths. Charcoal, though abundant in upper levels, was not collect-

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ed because its cultural versus natural genesis could not be ascertained.

Somewhat unexpectedly, several preceramic lithic artifacts were recovered in 1989, including a siltstone trihedral adze, an artifact type generally thought to be of Archaic or even Late Paleoindian age, as well as several taconite biface blanks or preforms exhibiting formal characteristics and parallel flaking strongly suggestive of Paleoindian (Lakehead Complex) workmanship. Because most known Paleoindian sites in the region are situated on post-Minong stage strandlines along the margin of the Superior Basin, an inland Paleoindian presence is of special interest.

At the time of writing (spring 1990), laboratory processing, cataloguing, sorting, and ceramic attribute recording are in progress. In addition, compositional analysis of ceramics is underway, using petrographic description of thin sections and elemental determination with a scanning electron microscope equipped with an energy dispersive spectrometer (SEM-EDS system). Other technical work planned but not yet underway includes floatation for macrobotanical remains, blood residue analysis of stone tools, radiocarbon dating, and spatial analysis of excavation data.

1989 FORT YORK ARCHAEOLOGY PROJECT

Catherine Webb

The Toronto Historical Board held its third consecutive archaeological excavation at Historic Fort York from May through September 1989. The excavation was directed by Catherine Webb and David Spittal and included a staff of fourteen archaeologists. Funding was provided through the City of Toronto. (For a description of the background and purpose of the archaeological project see the 1987 and 1988 reports on this work in this volume.)

During the summer of 1989, ten areas were tested extensively. These areas were along the route of proposed branch lines for a new storm drain and waterline system.

The first three areas tested were situated in the northwest bastion. These excavations yielded information regarding the foundations of the 1815 officers' quarters and associated drainage systems. In addition, the 1-metre-deep stone foundation from the northeast corner of an 1838 barracks and associated down-spout and drainage system were excavated.

Toronto Historical Board, Stanley Barracks, Exhibition Place, Toronto, Ontario, M6K 3C3

Excavation Licence 89-166C

A trench consisting of six units was excavated 30 metres east of the officers' quarters. Excavations here uncovered a c.1860 stone box drain and late eighteenth-century destruction debris from one of the original log huts built on the orders of Lieutenant-Governor John Graves Simcoe.

The partial foundation, burned wooden floor, and collapsed ceiling from an 1814 carpenters' shop were located immediately east of the stone magazine. A number of pewter buttons found near the building remains are American in origin, dating to the War of 1812.

A second c.1860 stone box drain, an early nineteenth-century wooden trough drain, and late eighteenth-century building debris were excavated in a trench immediately to the west of blockhouse no. 2. Southwest of this trench, a large pit filled with building debris, eighteenth-century ceramics, regimental buttons, and colonial coins was excavated. This pit may be related to the construction of the 1800-13 lieutenant-governor's house which stood nearby.

Although the extreme eastern end of the fort seems to have suffered some disturbance in the late nineteenth and early twentieth centuries, the remains of an

1815 guardhouse porch were located immediately east of the east magazine.

Excavation along the west wall of the east magazine revealed that the building has a relatively shallow stone foundation. This building was originally a one-storey building which was altered c.1823 into a two-storey building, although the foundations do not appear to have been strengthened at the same time.

A total of 35,843 artifacts were recovered in 1989. Excavation continues to produce a varied assemblage of domestic and military artifacts. Ceramics include eighteenth-century forms such as delft, white salt-glazed stoneware, Chinese export porcelain, creamware, and pearlware, as well as later nineteenth-century types such as refined white earthenware and ironstone. Regiments known to have been at the fort are represented by pewter/brass regimental buttons and military insignia. Other military artifacts include gunflints, musket fragments, and shako plate fragments.

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